

636557

REPORT NUMBER: 214-CAL-03-08

**SAFETY COMPLIANCE TESTING FOR FMVSS 214
SIDE IMPACT PROTECTION
INDICANT**

HONDA OF AMERICA MFG., INC.
2003 HONDA ELEMENT
MPV

NHTSA NUMBER: C35307

VERIDIAN ENGINEERING TEST NUMBER: 8675-F214-08

VERIDIAN ENGINEERING
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May 6, 2003

FINAL REPORT

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance
400 Seventh Street, SW
Room 6111 (NVS-220)
Washington, DC 20590

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16. Abstract <p>A 55/28 kph 90° Side Impact (Moving Deformable Barrier) Indicant Test was conducted on the subject Honda Element MPV. This test was performed at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001). This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on May 6, 2003.</p> <p>The impact velocity of the Moving Deformable Barrier (MDB) was 61.48 kph, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21°C. The target vehicle post-test maximum crush was 175 mm at level 2.</p> <p>The test or target vehicle's performance is given below:</p> <table border="1"> <thead> <tr> <th></th> <th>Front SID H3</th> <th>Rear SID H3</th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration:</td> <td>36.7 g's</td> <td>83.3 g's</td> </tr> <tr> <td>Left Lower Rib Acceleration:</td> <td>34.0 g's</td> <td>87.0 g's</td> </tr> <tr> <td>Lower Spine Acceleration:</td> <td>47.8 g's</td> <td>52.6 g's</td> </tr> <tr> <td>Thoracic Trauma Index (TTI):</td> <td>42 g's</td> <td>70 g's</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td>59 g's</td> <td>56 g's</td> </tr> </tbody> </table> <p>The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.</p>							Front SID H3	Rear SID H3	Left Upper Rib Acceleration:	36.7 g's	83.3 g's	Left Lower Rib Acceleration:	34.0 g's	87.0 g's	Lower Spine Acceleration:	47.8 g's	52.6 g's	Thoracic Trauma Index (TTI):	42 g's	70 g's	Pelvis Acceleration (PEV):	59 g's	56 g's
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SECTION 1

PURPOSE AND TEST PROCEDURE

This side impact test is part of the FMVSS 214 Side Impact Protection Compliance Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-02-D-01114. The purpose of this indicant test was to evaluate side impact protection in a 2003 Honda Element MPV when tested at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001).

SECTION 2

SUMMARY OF SIDE IMPACT TEST

This Side Impact Protection Indicant Test was performed at the New Car Assessment Program (NCAP) target test velocity of 62.0 kph, which is 8 kph faster than the target velocity required by the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001).

A 2003 Honda Element MPV was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 61.48 kph (38.2 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Veridian Engineering Transportation Sciences Center in Buffalo, New York on May 6, 2003. Pre- and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the Side Impact Hybrid III Dummies (SID H3s) are included in Appendix A.

Two restrained Side Impact Hybrid III Dummies (SID H3s) were placed in the driver (Pos. #1) and left rear (Pos. #4) designated seating positions according to the instructions specified in the OCWS Side Impact Laboratory Test Procedure which is dated July, 1997. The side impact test was documented by one real-time camera and 9 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SID H3s were instrumented with the following accelerometers:

1. Left Upper Rib (LUR) uniaxial and redundant accelerometer (Y direction)
2. Left Lower Rib (LLR) uniaxial and redundant accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial and redundant accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial and redundant accelerometer (Y-direction)
5. Nine Axis Array Heads (NAAH)
6. Head triaxial accelerometers (X-, Y- and Z-direction)
7. Upper neck force and moment (X-, Y and Z direction) load cells

A summary of the Side Impact Hybrid III Dummy (SID H3) configuration and verification test data can be found in Appendix C. A total of 72 channels of data were recorded. Appendix B contains the vehicle, MDB and dummy response data traces.

The following table summarizes the results of the test.

Injury Criteria	Front SID H3	Rear SID H3
TTI (g)	42	70
PEV (g)	59	56

AIR BAG DEPLOYMENT STATUS

	DRIVER	FRONT PASSENGER	REAR PASSENGER
Front Air Bag	Yes	No	N/A
Knee Bolster Bag	N/A	N/A	N/A
Side Air Bag	N/A	N/A	N/A
Side Curtain Bag	N/A	N/A	N/A

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET 1

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2003 Honda Element MPV
 Vehicle Body Color: Silver VIN: 5J6YH17213L006475
 Vehicle NHTSA No.: C35307 Month & Year of Manufacture: 3/03
 Engine Data: 4 Cylinders; - CID; 2.4 Liters; - cc
 Engine Placement: - Longitudinal; or X Lateral
 Transmission: 5 Speed; X Manual; - Automatic; X Overdrive
 Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive
 Odometer Reading 60 km
 Supplemental Airbag Restraints:
 Front Occupant: X Frontal; - Knee; - Side; - Curtain
 Rear Occupant: X Frontal; - Knee; - Side; - Curtain

Options: - A/C; X Power Steering; X Power Brakes; X Power Windows

DATA FROM TIRE PLACARD

Recommended Tire Size: P215/70R16

*Recommended Cold Tire Pressure: 220 kPa FRONT; 235 kPa REAR

DATA FROM TIRE SIDEWALL:

Size of Tires on Test Vehicle: P215/70R16 99S; Manufacturer: Goodyear

Tire Pressure with Maximum Capacity Vehicle Load: Front: 300 kPa; Rear: 300 kPa

Treadwear: 340; Traction: A; Temperature: B

VEHICLE CAPACITY DATA:

Number of Occupants: 2 Front; 2 Rear; 0 3rd Seat; 4 Total
 Type of Front Seats: X Bucket; - Bench; - Split Bench;
 Type of Rear Seats: - Bucket; - Bench; X Split Bench; X Contoured
 Type of Front Seat Back: - Fixed; X Adjustable with X Lever or - Knob
 Type of Rear Seat Back: - Fixed; X Adjustable with X Lever or - Knob
 Vehicle Max Capacity Loading = 306.16 kg (A)
 No. of Occupants x 68.04 kg. = 272.16 kg (B)
 Vehicle Cargo Capacity = 34 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front = 420.5 kg Left Rear = 331.0 kg
 Right Front = 403.0 kg Right Rear = 330.5 kg
 TOTAL FRONT = 823.5 kg TOTAL REAR = 661.5 kg
 % of Total Weight = 55.5% % % of Total Weight = 44.5 %
 TOTAL WEIGHT = 1485.0 kg

* Tire pressure used in test.

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max. Fluids	=	<u>1485.0</u>	kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	<u>34</u>	kg (B)
Weight of instrumented SID H3 Dummies (2 X 81.2 kg)	=	<u>162.4</u>	kg (C)
TEST VEHICLE TARGET WEIGHT:	=	<u>1681.4</u>	kg (A+B+C)

FULLY LOADED TEST VEHICLE (UDVW + 2 SID H3s + CARGO):

Left Front	=	<u>463.5</u>	kg	Left Rear	=	<u>425.0</u>	kg
Right Front	=	<u>408.5</u>	kg	Right Rear	=	<u>384.0</u>	kg
TOTAL FRONT	=	<u>872.0</u>	kg	TOTAL REAR	=	<u>809.0</u>	kg
% of Total Weight	=	<u>51.9%</u>	%	% of Total Weight	=	<u>48.1%</u>	%
TOTAL TEST WEIGHT =		<u>1681.0</u>	kg				

AS TESTED WEIGHT OF TEST VEHICLE (2 SID H3s + CARGO + EQUIPMENT & INSTRUMENTATION):

Left Front	=	<u>453.0</u>	kg	Left Rear	=	<u>414.5</u>	kg
Right Front	=	<u>413.5</u>	kg	Right Rear	=	<u>394.0</u>	kg
TOTAL FRONT	=	<u>866.5</u>	kg	TOTAL REAR	=	<u>808.5</u>	kg
% of Total Weight	=	<u>51.7%</u>	%	% of Total Weight	=	<u>48.3%</u>	%
TOTAL TEST WEIGHT =		<u>1675</u>	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED:

Left Front	<u>818</u>	Right Front	<u>815</u>	Left Rear	<u>826</u>	Right Rear	<u>825</u>
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FULLY LOADED:

Left Front	<u>802</u>	Right Front	<u>807</u>	Left Rear	<u>797</u>	Right Rear	<u>805</u>
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READY FOR TEST:

Left Front	<u>807</u>	Right Front	<u>811</u>	Left Rear	<u>797</u>	Right Rear	<u>802**</u>
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Test Vehicle Wheelbase. 2580 millimeters

C.G. = 1245.33 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side - 4247 millimeters

Left Side - 4244 millimeters

Centerline - 4295 millimeters

** Lower than fully loaded attitude. Test was conducted with permission from COTR

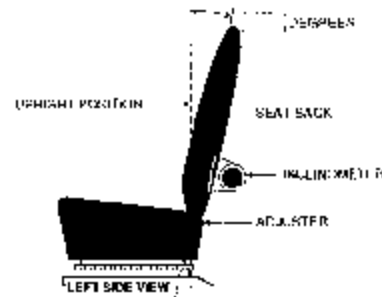
DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch/detent, if applicable.



FRONT SEAT ASSEMBLY

FRONT SEAT CUSHION PLACEMENT: Mid-position (14th detent or 140 mm)

Total Length of Adjustment Travel: 280 millimeters

Total Number of Adjustment Positions or Detents: 28

FRONT SEAT BACK ADJUSTMENT POSITION: 6th rearward notch

Seat Back Torso Angle: - degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0 millimeters

Seat Back Adjustment Position: 2nd rearward notch

ADJUSTABLE STEERING COLUMN POSITION: Mid-position

WINDOW POSITIONS: Left Front: Closed Left Rear: Closed

Right Front: Open Right Rear: Removed

Note: Windows will be in closed position on struck side of test vehicle and in open position on opposite side.

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

64.7 liters (Fuel Tank Usable Capacity)

60.2 liters used for test (92%-94% of Fuel Tank Usable Capacity)

LOCATION OF IMPACT POINT ON TEST VEHICLE SIDE TO BE IMPACTED:

Wheelbase = 2580 millimeters

Impact Point is 350 millimeters rearward of front axle centerline
(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 343 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2003 Honda Element

Body Style: MPV

VIN: 5J6YH17213L006475

NHTSA No.: C35307

Test Date: May 6, 2003

Overall Length = 4295 millimeters; Overall Width = 1760 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front = 453.0 kg Left Rear = 414.5 kg

Right Front = 413.5 kg Right Rear = 394.0 kg

TOTAL FRONT = 866.5 kg TOTAL REAR = 808.5 kg

TOTAL VEHICLE WEIGHT 1675.0 kg

Wheelbase = 2580 millimeters

Longitudinal C.G. from Center of Front Axle = 1245.33 millimeters

Impact Angle with Respect to Impactor = 90 degrees

ACTUAL IMPACT POINT

Actual Impact Point is 7 mm Forward of nominal impact ref. line (Lateral)

Actual Impact Point is 10 mm Below nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (343 mm above ground) = 94 millimeters

2. LEVEL 2 (728 mm above ground) = 175 millimeters

3. LEVEL 3 (791 mm above ground) = 173 millimeters

4. LEVEL 4 (1097 mm above ground) = 85 millimeters

5. LEVEL 5 (1644 mm above ground) = 6 millimeters

Maximum Post-Test Intrusion = 175 millimeters

OCCUPANTS:

Front Passenger:

Rear Passenger:

Dummy Identification SID H3/015

SID H3/016

Restraints Used 3-point safety belt

3-point safety belt

INSTRUMENTATION:

Number of Vehicle Data Channels: = 21

Number of Cameras: Onboard = 3

Offboard = 6

TOTAL = 9

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore, Inc. 028C0103-2 023B1102

POSITION OF IMPACT (MDB) ON MONORAIL:

Cribbed 27" to left

MDB DETAILS:

Overall Width of Framework Carriage	=	<u>1250</u>	millimeters
Overall Length of MDB (incl. honeycomb impact face)	=	<u>4120</u>	millimeters
Wheelbase of Framework Carriage	=	<u>2590</u>	millimeters
Tread of Framework Carriage (Front & Rear)	=	<u>1875</u>	millimeters
C.G. Location Rearward of Front Axle	=	<u>1104</u>	millimeters

MDB WEIGHT:

Left Front	=	<u>409.5</u>	kg	Left Rear	=	<u>281.5</u>	kg
Right Front	=	<u>372.5</u>	kg	Right Rear	=	<u>299.0</u>	kg
TOTAL FRONT =		<u>782.0</u>	kg	TOTAL REAR =		<u>580.5</u>	kg
TOTAL MDB WEIGHT =		<u>1362.5</u>	kg				
Impact Angle (MDB C/L to Target Vehicle C/L)	=	<u>90</u>	degrees				
Impact Speed	=	<u>61.48</u>	kph				

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	<u>177</u>	millimeters
2. Row B at Top of Bumper Level	=	<u>138</u>	millimeters
3. Row C at Mid Level	=	<u>126</u>	millimeters
4. Row D at Top of Stack Level	=	<u>149</u>	millimeters

INSTRUMENTATION:

Number of MDB Data Channels	=	<u>5</u>
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DATA SHEET 4
POST-TEST OBSERVATIONS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

TEST DUMMY INFORMATION AND CONTACT POINTS:

DESCRIPTION	FRONT SEAT	REAR SEAT
ATD Type/Serial No.	SID H3/015	SID H3/016
Head Contact:	The back of the head to the head restraint	The top of the head to the side header
Upper Torso Contact:	Door Trim Panel	"C" Pillar
Lower Torso Contact:	Door Trim Panel	"C" Pillar
Left Knee Contact:	Door Trim Panel	Door Trim Panel
Right Knee Contact:	Left Knee	Left Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

DESCRIPTION	FRONT	REAR
Left Side Doors	Closed, Latched and Inoperable	Closed, Latched and Inoperable
Right Side Doors	Closed, Latched and Operable without Tools	Closed, Latched and Operable without Tools
Hatch/Other Door	N/A	Closed, Latched and Operable without Tools
Seat Movement (mm)	0	0
Seat Back Failure	None	None

POST TEST STRUCTURAL OBSERVATIONS

CRITICAL AREAS OF PERFORMANCE	
Pillar Performance	A- and "C"-pillars were moved inboard with no visible tears or separations.
Sill Separation	No visible tears or separations
Windshield Damage	None
Window Damage	Rear left side window shattered during the event.
Other Notable Effects	None

AIR BAG DEPLOYMENT STATUS:

	DRIVER	FRONT PASSENGER	REAR PASSENGER
Front Air Bag	Yes	No	N/A
Knee Bolster Bag	N/A	N/A	N/A
Side Air Bag	N/A	N/A	N/A
Side Curtain Bag	N/A	N/A	N/A

MDB LEFT EDGE IMPACT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	± 50 mm	7 mm forward
Vertical Offset	mm	± 20 mm	10 mm below

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5

SID H3 INSTRUMENTATION DATA

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

		Front Dummy ID# 015				Rear Dummy ID# 016			
		Pos. Direction		Neg. Direction		Pos. Direction		Neg. Direction	
		Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
HEAD ACCELERATIONS:									
NAAH X Arm	Y	46.4	84.6	-4.8	46.6	116.6	67.4	-13.0	82.6
NAAH X Arm	Z	39.2	64.4	-2.6	99.4	14.0	63.3	-45.0	72.5
NAAH Y Arm	X	1.3	199.9	-26.7	84.4	16.3	77.4	-41.1	64.0
NAAH Y Arm	Z	33.6	56.8	-6.9	84.8	31.2	63.1	-60.7	64.8
NAAH Z Arm	X	2.8	54.6	-39.8	83.9	26.1	76.2	-34.8	65.7
NAAH Z Arm	Y	90.0	84.2	-20.0	54.8	213.7	63.7	-52.4	74.4
Longitudinal	X	1.3	44.3	-19.9	84.4	8.4	73.5	-16.1	65.9
Lateral	Y	53.1	84.6	-2.8	44.0	141.7	66.1	-13.0	81.4
Vertical	Z	32.8	69.2	-1.8	36.8	22.1	66.0	-52.4	78.4
Resultant	R	60.3	84.4	0.0	-15.3	143.8	66.1	0.0	-2.8
HIC		200.3				10-3.1			
NECK FORCES:									
Longitudinal	X	40.3	44.9	-585.6	87.0	1211.3	78.6	-103.6	147.7
Lateral	Y	605.4	85.9	-98.6	40.9	661.9	69.2	-1711.0	78.5
Vertical	Z	1337.0	69.3	-525.7	85.4	659.4	57.5	1794.5	77.4
Resultant	R	1444.9	69.3	0.1	-13.9	2709.9	78.1	0.1	-3.1
NECK MOMENTS:									
X		39.9	83.4	-40.4	55.4	17.2	137.5	-230.7	70.3
Y		†	†	†	†	21.7	81.2	28.2	73.9
Z		§	§	§	§	6.3	127.2	-24.6	72.1
Resultant	R	§	§	§	§	232.9	70.4	0.0	2.9
RIB ACCELERATIONS:									
Upper Rib Lateral	Y	36.7	57.5	-3.9	76.3	83.3	58.2	-23.1	65.0
Upper Rib Lateral	Y(R)	35.8	57.5	-4.7	76.8	81.5	58.7	-21.5	65.0
Lower Rib Lateral	Y	34.0	43.8	-3.2	73.1	87.0	58.1	-11.6	85.0
Lower Rib Lateral	Y(R)	34.0	43.8	-3.0	73.2	90.3	58.1	-12.1	85.6
SPINE ACCELERATIONS:									
Lower Lateral	Y	47.8	46.3	-3.3	95.0	52.6	62.5	-33.5	81.3
Lower Lateral	Y(R)	46.8	46.3	-3.4	95.0	53.0	62.5	-33.1	81.3
PELVIC ACCELERATIONS:									
Lateral	Y	59.4	40.6	-12.4	60.0	55.8	45.0	-14.5	68.1
Lateral	Y(R)	60.4	40.7	-12.5	60.0	54.5	45.0	-14.1	68.1

REFERENCE: Positive Direction: Longitudinal (X) = forward; Lateral (Y) = to right; Vertical (Z) = down

Note: Rib, Spine and Pelvis data has been FIR filtered, Y(R) denotes redundant Y direction accelerometer.

Head Accelerations and Neck Forces are filtered at SAE Class 1000, Neck Moments are filtered at SAE Class 600.

† Channel Opened

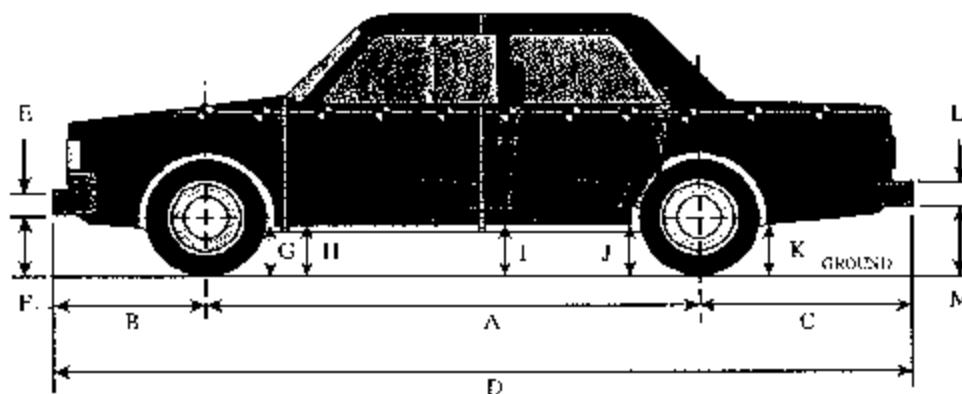
§ Data is Questionable

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



LEFT SIDE VIEW

NOTE: all dimensions are in millimeters with tolerance of ± 3 mm

	PRE-TEST (as delivered)	PRE-TEST (as tested)	POST-TEST (as tested)	Δ CHANGE
A	2575	2580	2555	-25
B	819	-	870	1
C	901	-	917	16
D	4295	-	4292	-3
E	158	-	158	0
F	312	309	330	21
G	297	282	286	4
H	297	282	281	-1
I	307	286	278	-8
J1	297	272	273	1
J2	307	282	296	14
K	350	326	329	3
L	135	-	135	0
M	390	366	365	-1
N	760	-	744	-16
O	707	-	706	-1
P	1007	-	958	-49
Q	448	-	441	-7
R	4247	-	4251	4
S	4244	-	4243	-1
T	1760	-	1652	-108

D = Length at Centerline

E&L = Bumper Thickness

R = Right Side Length

S = Left Side Length

T = Width at B-Pillar

J1 = To Pinch Weld

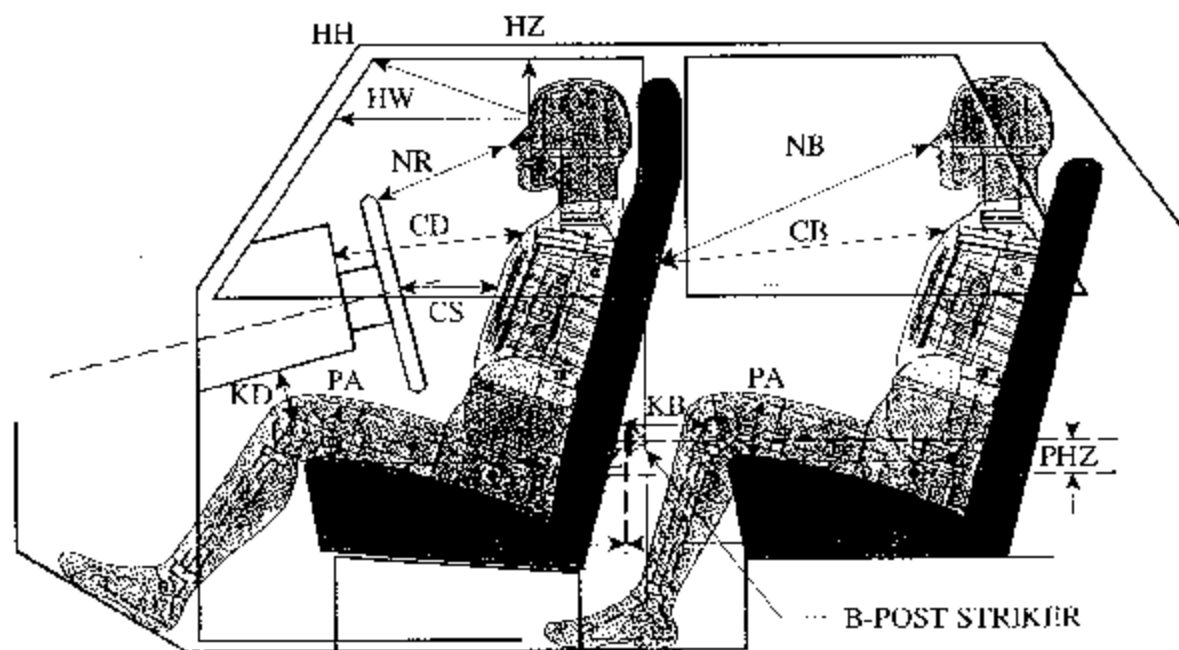
J2 = To Sill

DATA SHEET 7

SID H3 LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



LEFT SIDE VIEW

NOTE: 2-DOOR VEHICLE SHOWN.
REAR DUMMY PHX & PHZ
MEASUREMENTS FOR A 4-DOOR
VEHICLE WOULD USE THE C-POST
STRIKER AS A REFERENCE POINT

NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID# 015	LEFT REAR PASS. ID# 016
HH	725	N/A
HW	895	N/A
HZ	250	164
NR/NB	493	855
CD/CB	614	755
CS	280	N/A
KDL(KDA°)/KBL(KBA°)	115 / (35 °)	381 / (22 °)
KDR(KBA°)/KBR(KBA°)	121 / (38 °)	390 / (28 °)
PA°	23.4 °	24.4 °
PHX	256	785
PHZ	153	371

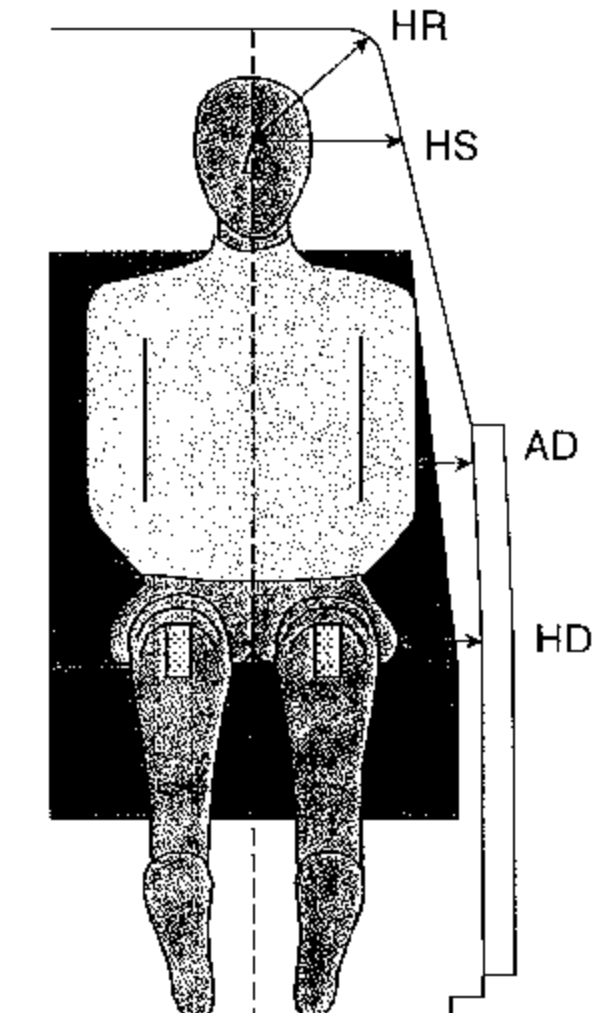
Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID H3 LATERAL CLEARANCE DIMENSIONS

Vehicle: 2003 Honda Element MPV

NHTSA No. 435307



NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID # 015		LEFT REAR PASS. ID # 016	
HR	272		295	
HS	330		440	
AD*	LOWER: 115	UPPER: 97	LOWER: 131	UPPER: 258
HD	196		133	

* Lower measurement is taken laterally at the center of the lower rib accelerometer height from the SID H3 arm segment to the closest part of the vehicle side.

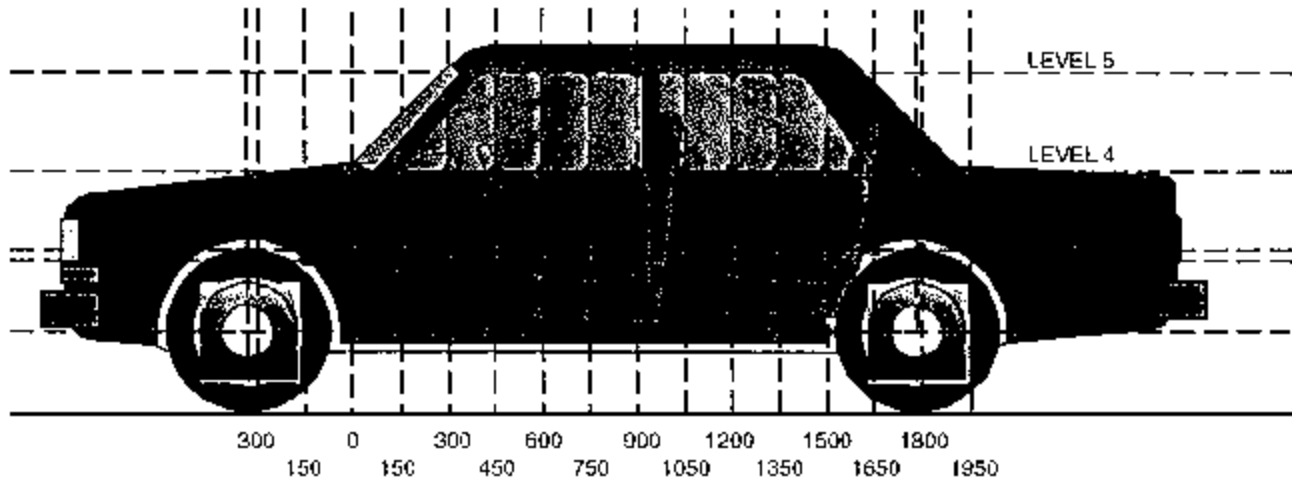
Upper measurement is taken laterally at the center of the upper rib accelerometer height from the SID H3 arm segment to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



LEFT SIDE VIEW

NOTE: All measurements are in millimeters (mm)

LEVEL 5 - WINDOW TOP

LEVEL 4 - WINDOW SILL

LEVEL 3 - MID-DOOR

LEVEL 2 - OCCUPANT H-POINT

LEVEL 1 - AXLE CENTERLINE HEIGHT OR SILL TOP HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED" CONFIGURATION.

Measurements Along the Vertical 750 mm Line Shown Above.

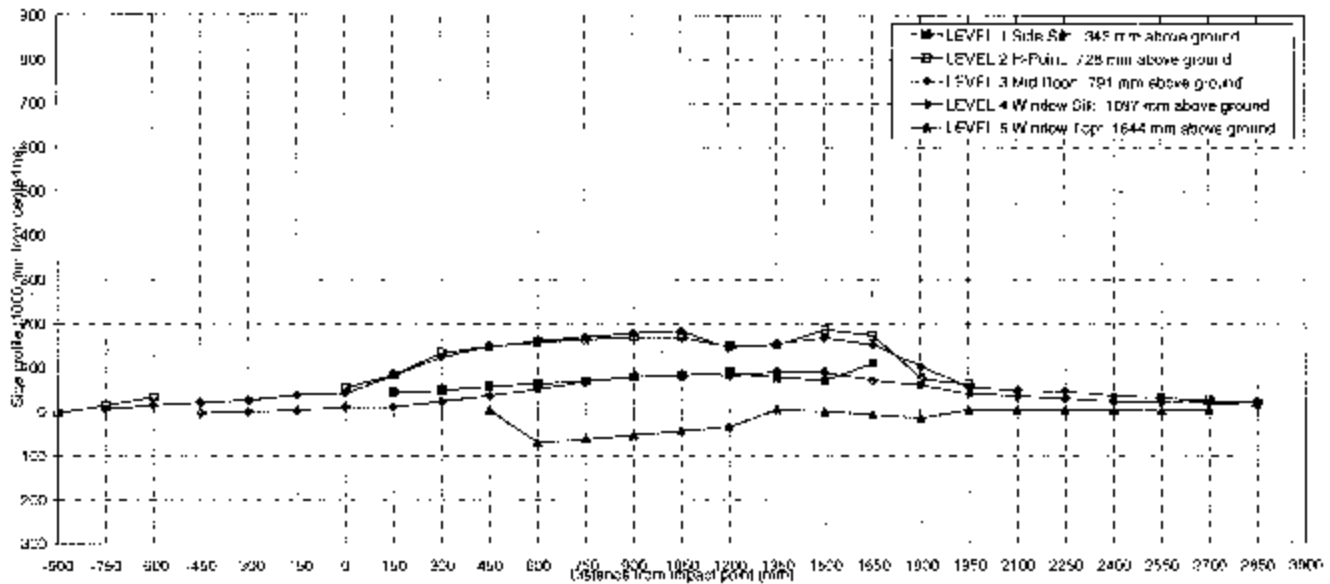
Level 5 @ Window Top	=	<u>1644</u>	millimeters
Level 4 @ Window Sill	=	<u>1097</u>	millimeters
Level 3 @ Mid Door	=	<u>791</u>	millimeters
Level 2 @ Occupant H-Point	=	<u>728</u>	millimeters
Level 1 @ Axle Centerline Height (or Sill Top Height)	=	<u>343</u>	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



NOTE: All dimensions are in millimeters with a tolerance of ±1 mm

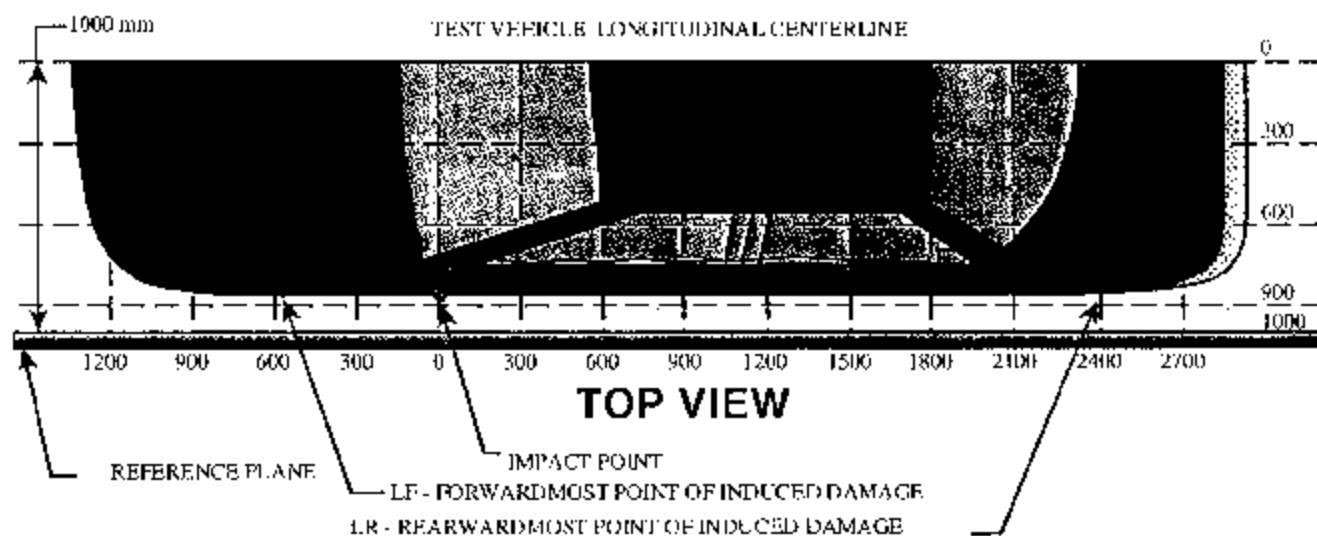
		DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																											
LEVEL	HEIGHT (mm)		300	750	900	450	300	150	0	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000
LEVEL 1 SIDE SILL	345	PRE	-	-	-	-	-	-	-	185	201	200	200	199	186	197	198	199	204	167	-	-	-	-	-	-	-	-	-
		POST	-	-	-	-	-	-	-	216	239	244	249	254	260	264	270	261	259	256	-	-	-	-	-	-	-	-	-
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	-	31	37	44	51	55	51	57	74	67	55	94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LEVEL 2 H-POINT	725	PRE	227	300	379	-	-	-	-	155	152	150	148	148	146	145	145	146	148	152	156	159	-	-	-	151	152	159	-
		POST	341	491	554	-	-	-	-	225	256	287	298	302	305	307	282	287	323	314	312	354	-	-	-	319	316	305	-
		CRUSH	31	7	25	N/A	N/A	N/A	-	74	124	137	148	54	159	158	157	141	155	163	62	49	N/A	N/A	N/A	19	31	6	N/A
LEVEL 3 MID FLOOR	791	PRE	-	198	148	123	120	121	-	151	145	147	146	145	144	143	141	147	146	148	149	149	119	154	120	152	172	198	-
		POST	-	176	156	137	178	150	-	229	264	286	299	306	314	316	276	288	304	290	211	177	156	148	141	172	181	208	-
		CRUSH	N/A	0	8	14	18	19	-	72	115	139	153	61	169	173	135	146	156	142	42	44	37	54	44	29	8	10	N/A
LEVEL 4 WINDOW SILL	1097	PRE	-	-	-	257	219	207	-	197	181	177	172	170	167	165	166	167	168	169	171	173	177	183	189	196	209	243	-
		POST	-	-	-	251	215	206	-	193	180	188	178	172	161	156	140	152	150	144	124	105	105	105	105	105	119	238	-
		CRUSH	N/A	N/A	N/A	6	4	1	-	6	18	31	46	42	75	71	74	52	62	64	53	23	38	24	16	15	10	5	N/A
LEVEL 5 WINDOW TOP	1644	PRE	-	-	-	-	-	-	-	-	349	322	325	321	317	312	310	308	305	302	302	302	302	302	302	302	302	302	-
		POST	-	-	-	-	-	-	-	-	354	303	264	260	274	279	316	308	309	309	297	316	313	322	326	332	351	-	-
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	-	-	5	-69	-61	-52	-43	-33	6	3	17	15	4	2	2	1	0	2	N/A	N/A	-

DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



NOTE: All dimensions are in millimeters with tolerance of ± 3 mm.

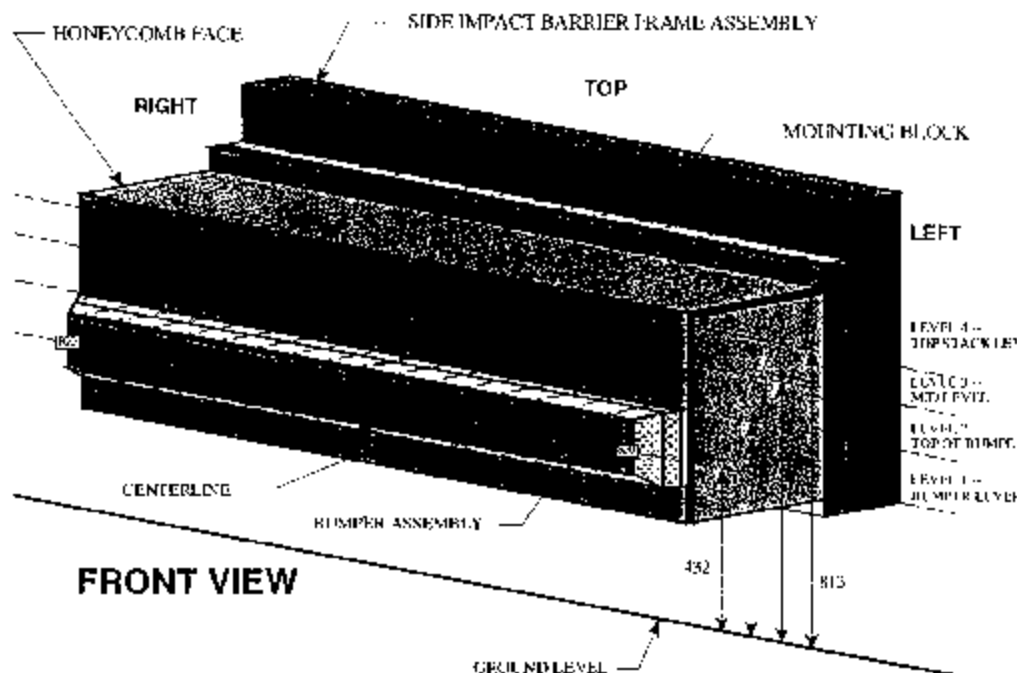
DPD MEASUREMENTS		POST TEST (mm)	PRETEST (mm)	STATIC CRUSH (mm)
1	(LR = -860 mm)	236	235	1
2	-148	157	121	36
3	564	304	146	158
4	1276	291	142	149
5	1988	182	129	53
6	(LF = 2700 mm)	195	172	23

DATA SHEET 12

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



NOTE: Dimensions are shown in millimeters, mm.

NOTE: All dimensions are in millimeters with a tolerance of ± 2 mm.

LEVEL	HEIGHT AT CL (mm)*		DISTANCE RIGHT OF CENTER (mm)									DISTANCE LEFT OF CENTER (mm)							
			800	700	600	500	400	300	200	100		100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	813	PRE	619	619	619	619	619	619	619	619		619	619	619	619	619	619	619	619
		POST	737	711	697	688	727	731	674	655		658	660	670	686	692	716	739	758
		CRUSH	118	32	73	69	108	102	55	36		19	41	51	57	74	97	120	149
LEVEL 3 MID LEVEL	686	PRE	619	619	619	619	619	619	619	619		619	619	619	619	619	619	619	619
		POST	741	677	668	680	711	704	674	662		646	646	649	657	670	684	706	745
		CRUSH	122	58	49	61	92	85	55	43		27	27	30	38	51	65	87	126
LEVEL 2 TOP BUMPER	533	PRE	619	619	619	619	619	619	619	619		619	619	619	619	619	619	619	619
		POST	757	754	748	745	738	741	735	738		734	736	734	735	734	735	738	738
		CRUSH	138	135	129	126	119	122	116	119		115	117	115	116	115	116	119	119
LEVEL 1 MID BUMPER	432	PRE	535	519	518	518	518	518	518	518		518	518	518	518	518	518	519	535
		POST	711	696	692	691	694	691	680	680		677	679	676	674	673	674	677	696
		CRUSH	176	177	174	173	176	174	162	162		159	161	158	156	155	156	158	155

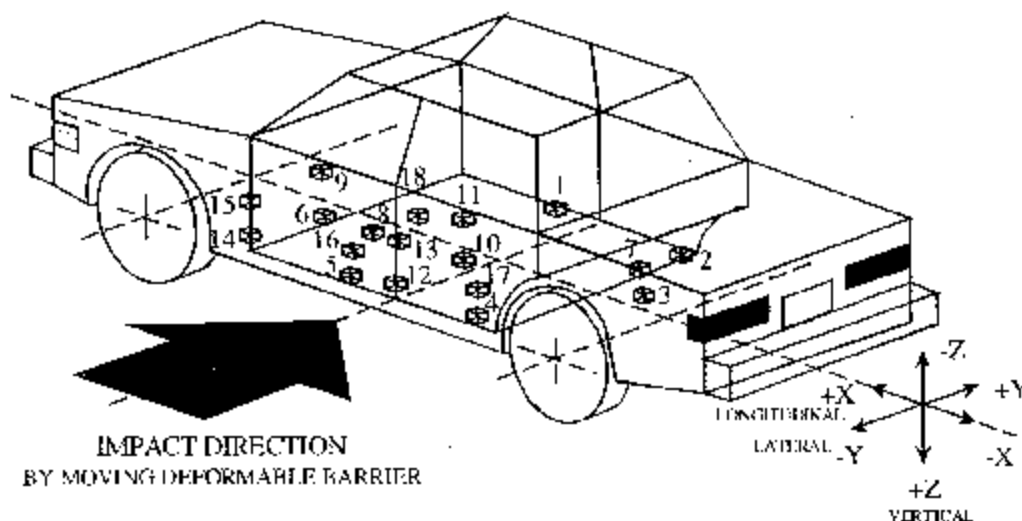
*Heights measured above ground level.

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



- 1-Right Side Sill @ Front Seat
- 2-Right Side Sill @ Rear Seat
- 3-Rear Floorpan Above Axle
- 4-Left Side Sill @ Rear Seat
- 5-Left Side Sill @ Front Seat
- 6-Left Front Door on Centerline
- 7-Right Rear Occupant Compartment
- 8-Midrear of Left Front Door
- 9-Left Front Door Upper Centerline

- 10-Midrear of Left Rear Door
- 11-Left Rear Door Upper Centerline
- 12-Left Lower B-Pillar
- 13-Left Middle B-Pillar
- 14-Left Lower A-Pillar
- 15-Left Middle A-Pillar
- 16-Front Seat Track
- 17-Rear Seat Track
- 18-Vehicle CG

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

Accel. No.	Location	Coordinates (mm)±3 mm			Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
1	Right Side Sill at Front Seat	2797	656	-380	pos. 2.8 neg. -10.6	50.9 8.5	42.2 -3.4	7.1 66.0	5.1 -11.5	131.7 7.2	44.6 0.0	7.2 -16.8
2	Right Side Sill at Rear Seat	1682	587	-533	pos. 3.3 neg. -7.5	51.1 7.8	44.4 -3.0	7.1 70.9	5.8 -8.5	77.3 16.2	45.2 0.0	7.1 -20.0
3	Rear Floorpan Above Axle	998	20	-534	pos. 2.5 neg. -6.5	51.8 10.8	40.5 -2.8	8.2 109.8	4.3 -5.8	70.3 53.1	40.8 0.0	8.3 -20.0
4	Left Side Sill at Rear Seat	1597	-520	-514	pos. - neg. -	- -	45.8 -46.3	4.1 7.7	- -	- -	- -	- -
5	Left Side Sill at Front Seat	2714	-558	-367	pos. - neg. -	- -	§ §	§ §	- -	- -	- -	- -
6	Left Front Door on Centerline	-	-	-	pos. - neg. -	- -	** +	** **	- -	- -	- -	- -
7	Right Rear Occupant Compartment	1704	353	-532	pos. - neg. -	- -	40.3 -3.3	7.6 109.2	- -	- -	- -	- -
8	Midrear of Left Front Door	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -
9	Left Front Door Upper Centerline	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -
10	Midrear of Left Rear Door	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -
11	Left Rear Door Upper Centerline	-	-	-	pos. - neg. -	- -	** **	** **	- -	- -	- -	- -

*Reference: X - Rear Bumper (+ Forward)

**Accelerometer was not requested by COTR.

Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Down)

§ - Not Accurate after 82 ms

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307

Accel. No.	Location	Coordinates (mm) ±3 mm			Long. (x)		Lat. (y)		Veh. (z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
12	Left Lower B-Pillar	1953	-674	-526	-	-	222.3	3.0	-	-	-	-
					-	-	-86.2	6.7	-	-	-	-
13	Left Middle B-Pillar	1917	-654	-1204	pos.	-	÷	÷	-	-	-	-
					-	-	÷	÷	-	-	-	-
14	Left Lower A-Pillar	2969	-595	-453	pos.	-	147.1	7.5	-	-	-	-
					-	-	-71.3	26.2	-	-	-	-
15	Left Middle A-Pillar	2926	-647	-1149	pos.	-	36.4	9.1	-	-	-	-
					-	-	-8.9	4.4	-	-	-	-
16	Front Seat Track	2086	-551	-463	pos.	-	63.4	5.0	-	-	-	-
					-	-	-11.4	9.1	-	-	-	-
17	Rear Seat Track	1389	-493	-526	pos.	-	133.3	6.0	-	-	-	-
					-	-	-33.2	21.2	-	-	-	-
18	Vehicle CG	2589	132	-380	pos.	3.7	49.4	9.5	12.7	19.9	51.3	9.3
					-10.6	8.4	-3.5	75.2	-14.5	8.0	0.0	-19.6

*Reference: X - Rear Bumper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Down)

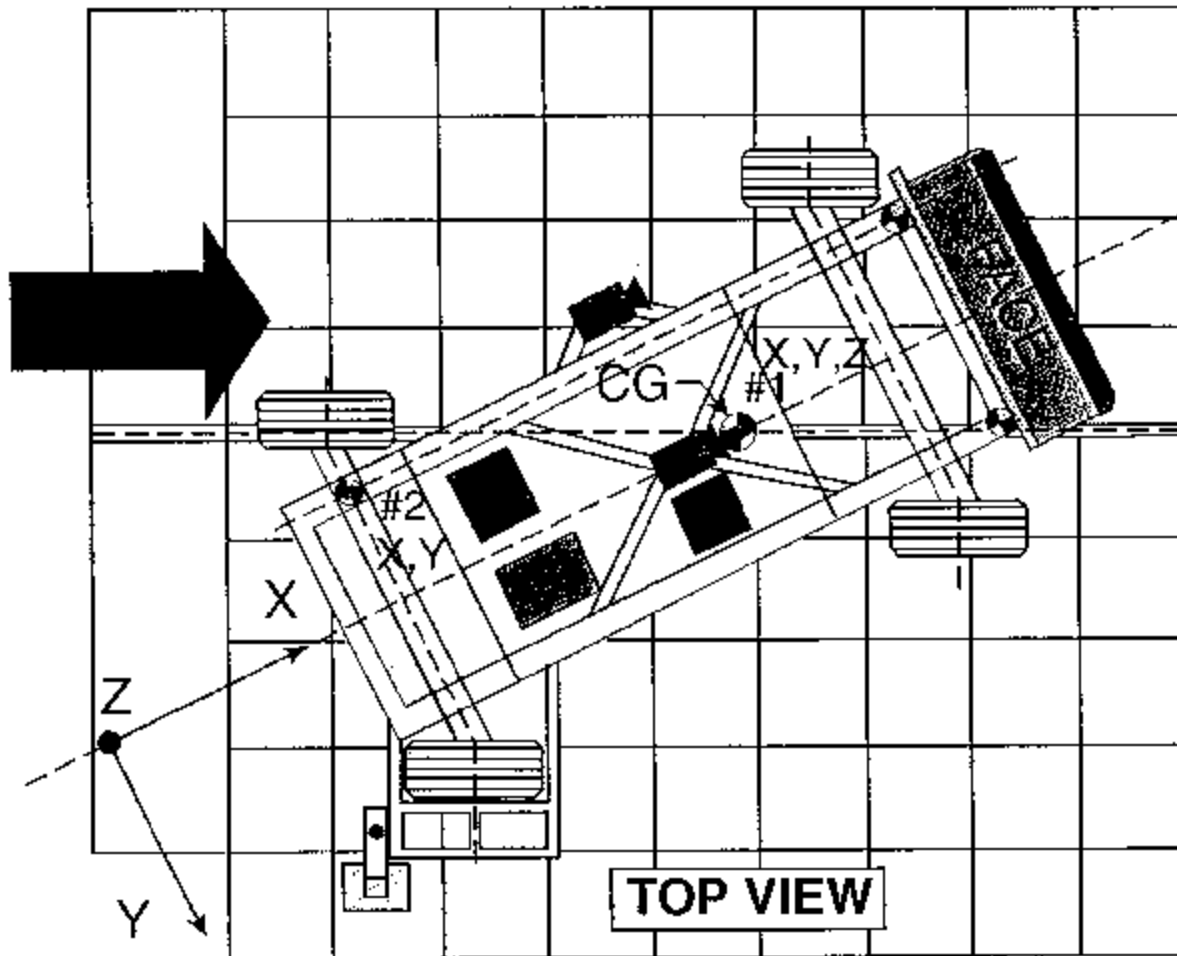
÷ - Not accurate after 23 ms.

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NHTSA No. C35307



Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal... X	1859	0	-330	1.0	91.7	-21.7	35.1
	Lateral..... Y				2.0	55.1	-7.0	31.2
	Vertical..... Z				18.4	52.4	-17.9	58.6
	Resultant..... R				26.7	40.3	0.1	179.3
2	Rear Frame Member							
	Longitudinal... X	386	-660	-660	1.3	87.7	-24.6	28.9
	Lateral..... Y				3.6	18.8	-2.5	57.9

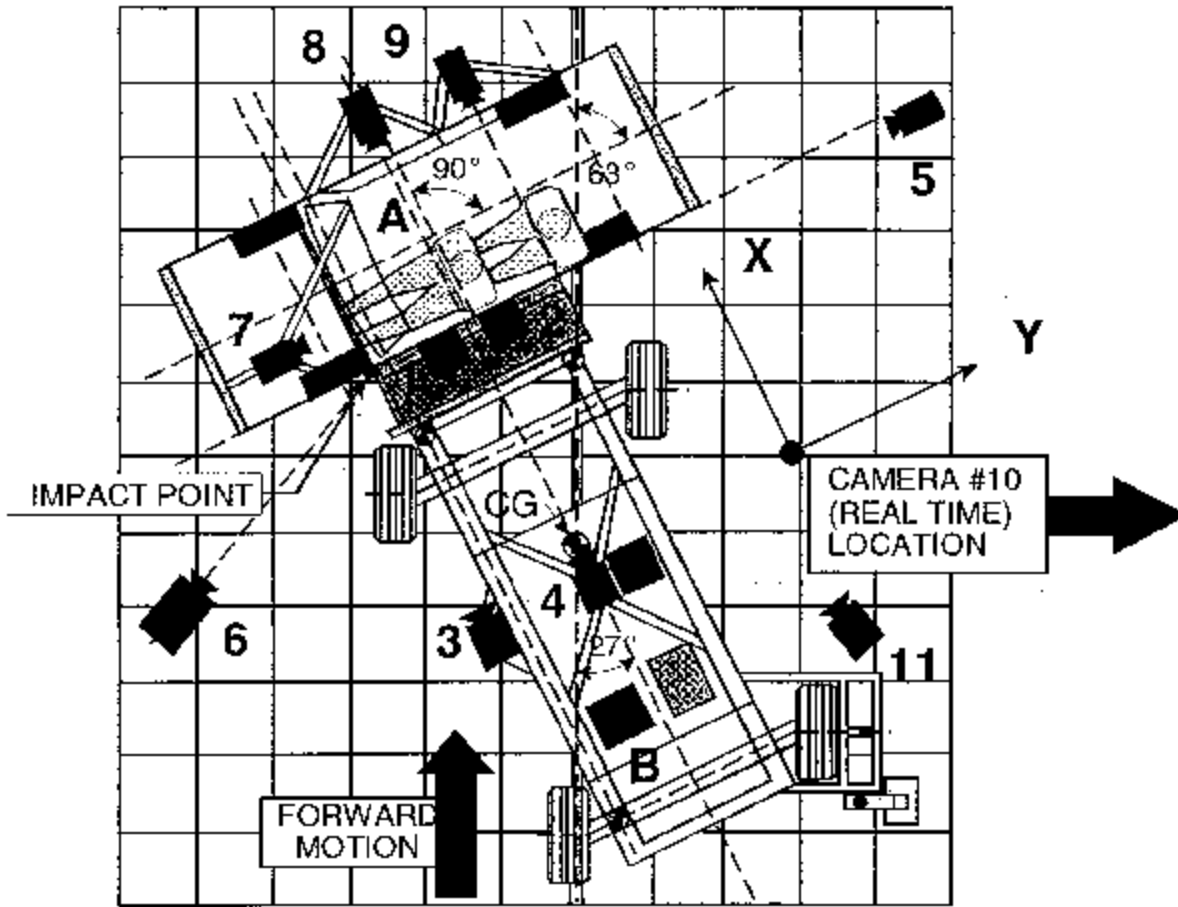
*Reference: X = Rear Bumper (+ Forward)
Y = Vehicle Centerline (+ To Right)
Z = Ground Level (+ Down)
All measurements accurate to within +3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Honda Element MPV

NIITSA No. C35307



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	329	902	-4880	-90	8	1000
2	Overhead closeup view of impact plane	88	740	-4880	-90	12.5	1000
3	MDB onboard closeup view of impact point	-1470	0	-847	0	13	1010
4	MDB onboard view of driver dummy	-1140	838	-1586	-17	7.5	1000
5	Right side ground level overall view	-65	9325	-1088	-2	25	1000
6	Left side ground level overall view	-2310	-1567	-1069	-4	13	1000
7	Test vehicle onboard driver front view	495	-38	-1434	-10	13	800
8	Test vehicle onboard driver side view	1670	803	-1255	-5	8	1000
9	Test vehicle onboard passenger side view	1775	1595	-1295	-8	8	900
10	Real time film coverage of test	-	-	-	-	-	24

* Reference (from point of impact); all measurements accurate to within ± 6 mm.

X = (Impact Point) + Forward

Y = (Impact Point) + To Right

Z = (Ground Level) + Down

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

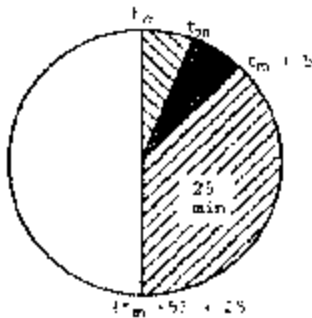
FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA No.: C35307 TEST DATE: May 6, 2003
 Vehicle Mfr./Make/Model: Honda of America Mfg., Inc. 2003 Honda Element MPV

TEST VEHICLE IMPACT TYPE:

- Frontal (48.28 kph)
- Oblique (48.28 kph) with - " barrier face first
 contacting the - side
 (driver/passenger)
- Rear Moving Barrier (48.28 kph)
- Lateral Moving Barrier (32.19 kph)
- X Side Impact Moving Deformable Barrier (62.0 kph)
 contacting the driver side side
 (driver/passenger)

FUEL SPILLAGE MEASUREMENT:



1. From impact until vehicle motion ceases
2. For five minute period after vehicle motion ceases
3. For next 25 minutes

ACTUAL	MAX ALLOWED
0 g	28 g
0 g	142 g
0 g	28 g/1 min.

SOLVENT SPILLAGE DETAILS:

None

DATA SHEET 17

ROLLOVER DATA

Vehicle: 2003 Honda Element MPV

NHTSA No.: C35307



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Stage	Rotation Time (spec. 1-3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	11	seconds	5	minutes	6	minutes	11	seconds	7	minutes
90° - 180°	1	minutes	03	seconds	5	minutes	6	minutes	3	seconds	7	minutes
180°-270°	1	minutes	00	seconds	5	minutes	6	minutes	0	seconds	7	minutes
270°-360°	1	minutes	10	seconds	5	minutes	6	minutes	10	seconds	7	minutes

II. FMVSS 301 REQUIREMENTS: (Maximum allowable solvent spillage):

First 5 minutes from onset of rotation	6th min.	7th min.	8th min. (if required)
142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

Rollover Stage	Spillage Location
0° - 90°	None
90° - 180°	None
180°-270°	None
270°-360°	None

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PHOTOGRAPHS

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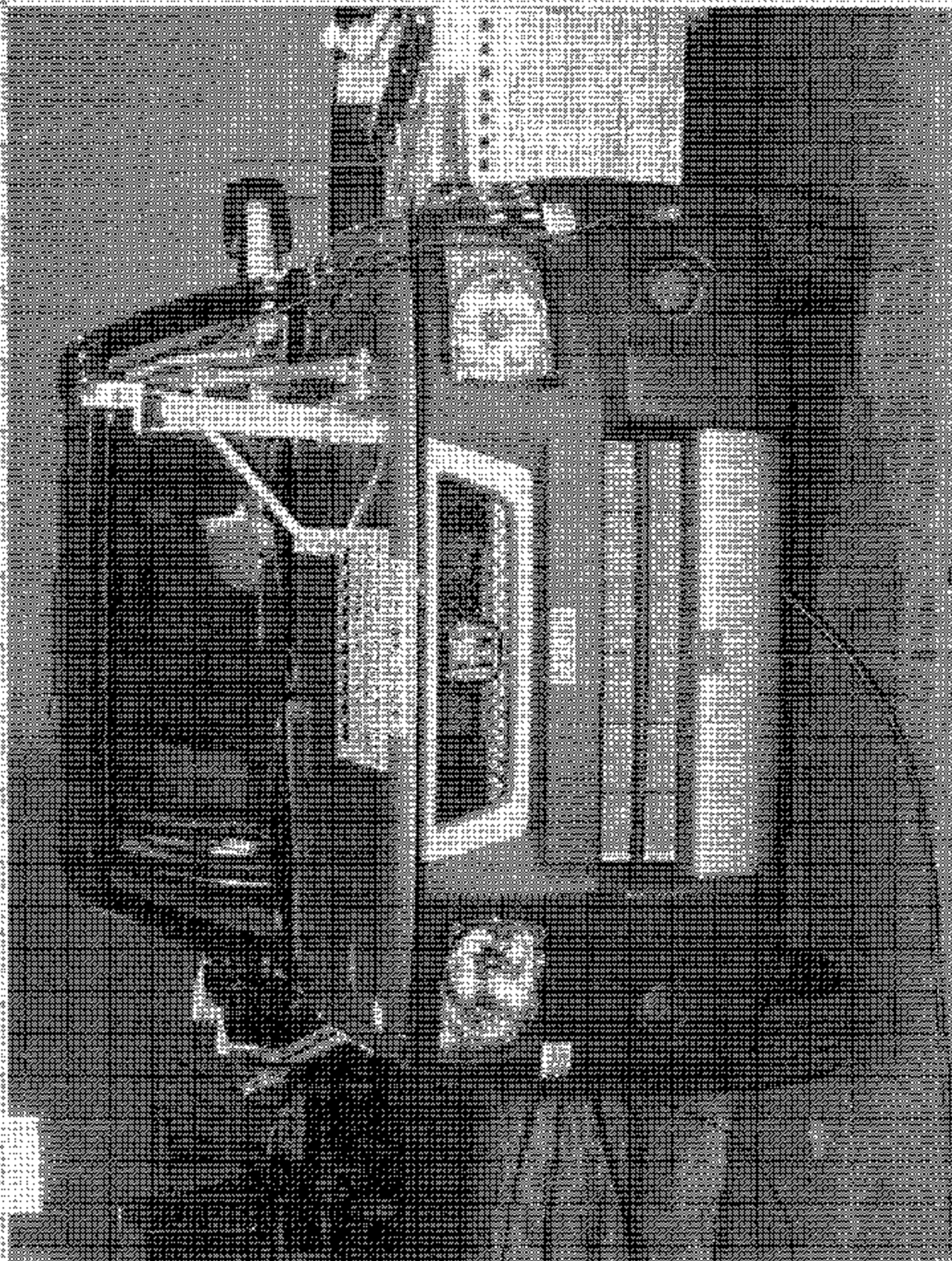


FIGURE A. PRE-TEST INITIAL VIEW OF TEST VEHICLE

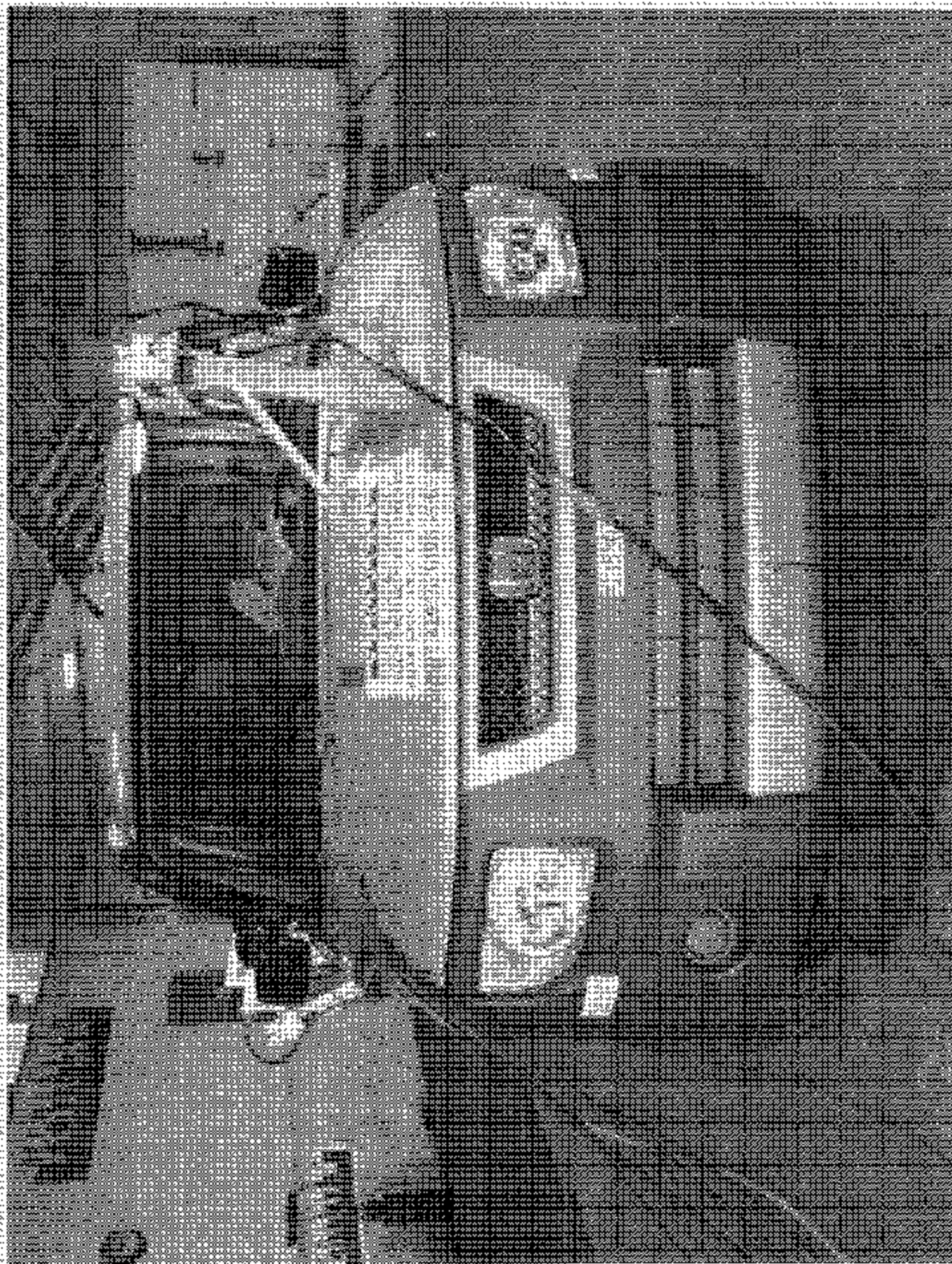


Figure A-2 POST TEST FRONTAL VIEW OF TEST VEHICLE

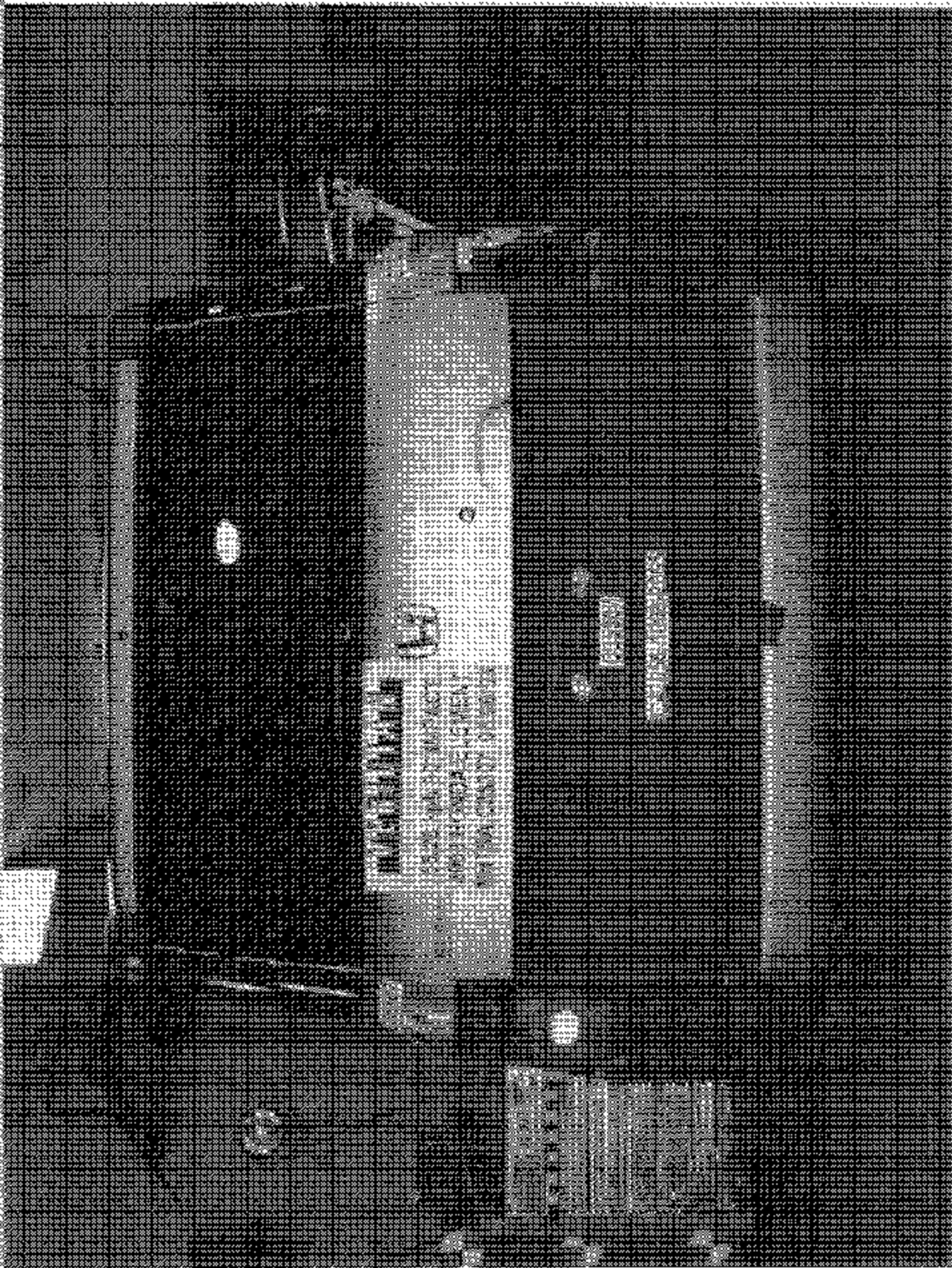


Figure A7: Projected View of the Vehicle

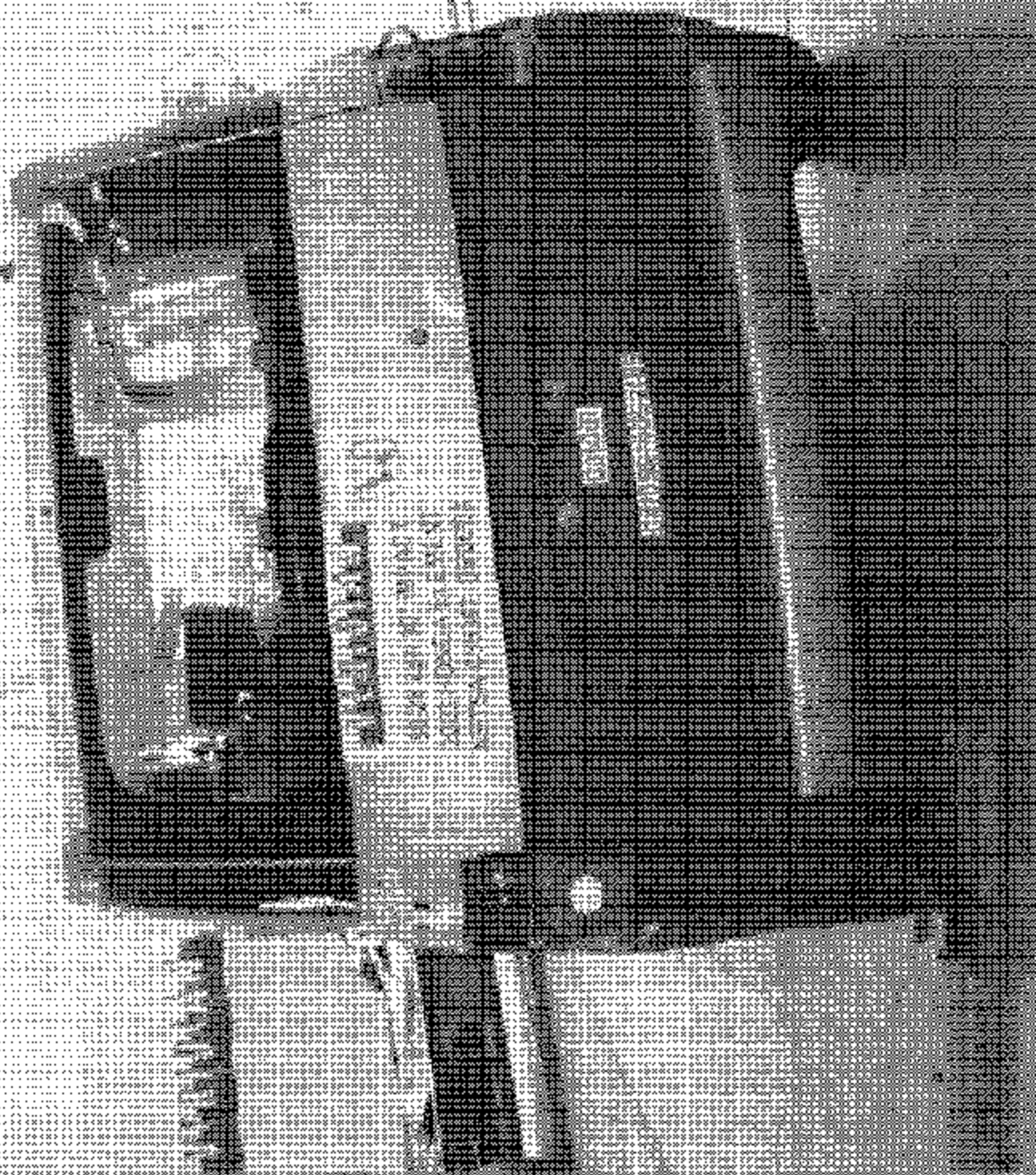


Figure A-1 POST-TEST REAR VIEW OF TEST VEHICLE

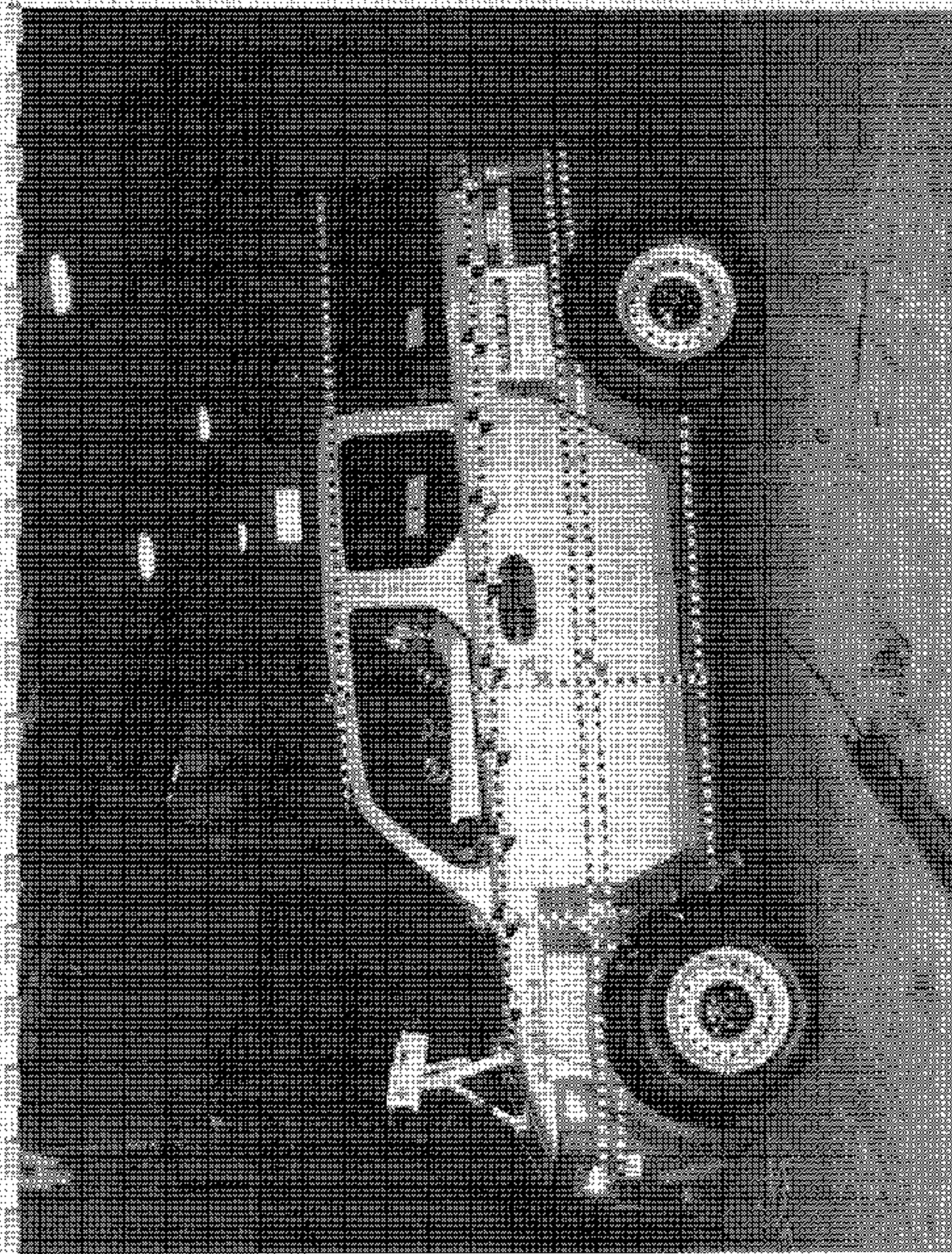


FIGURE 3.5 PHOTOGRAPH OF A TRUCK SIDE VIEW OF TEST VEHICLE

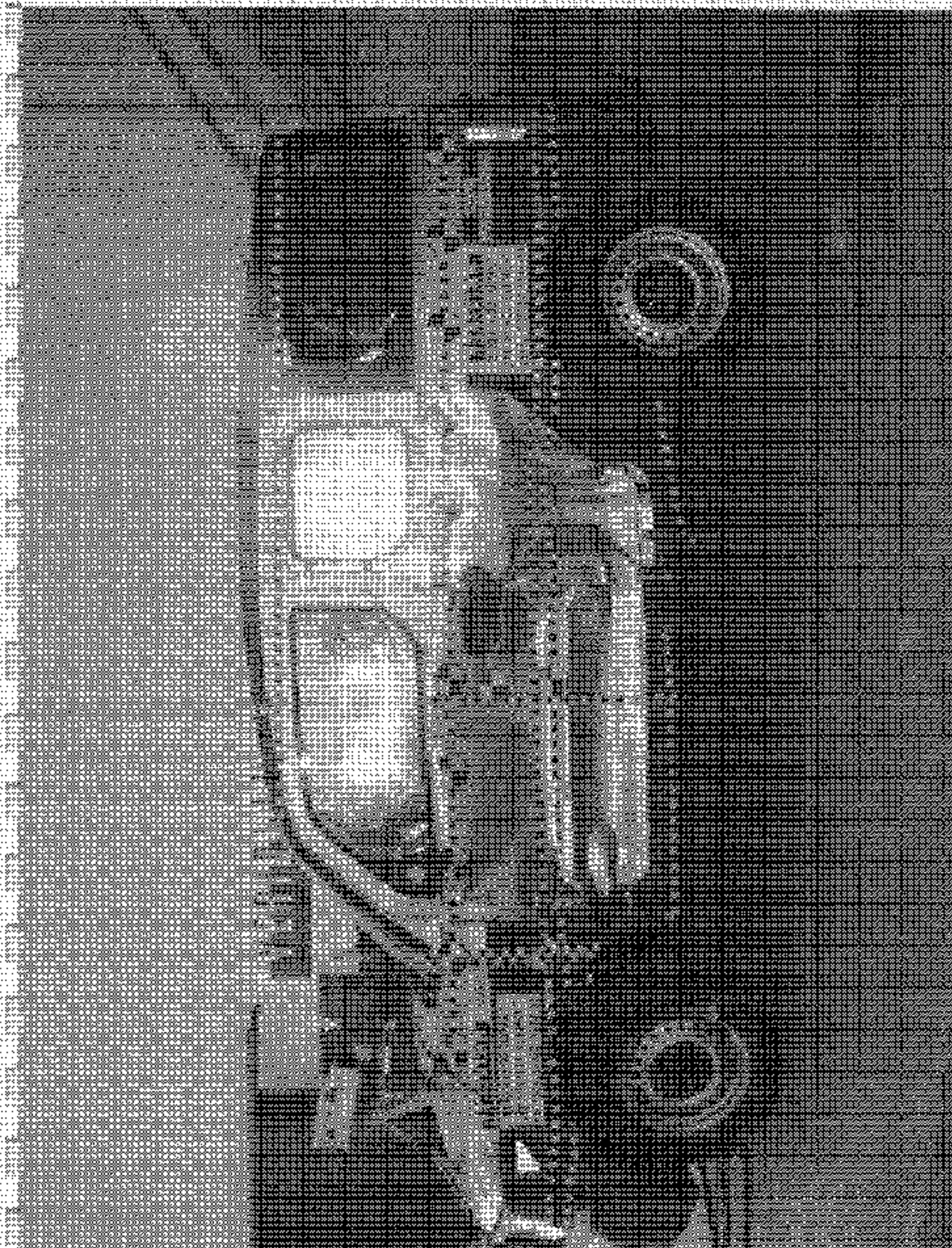


FIGURE A-5 POST-TEST EXPANDED VIEW OF TEST VEHICLE

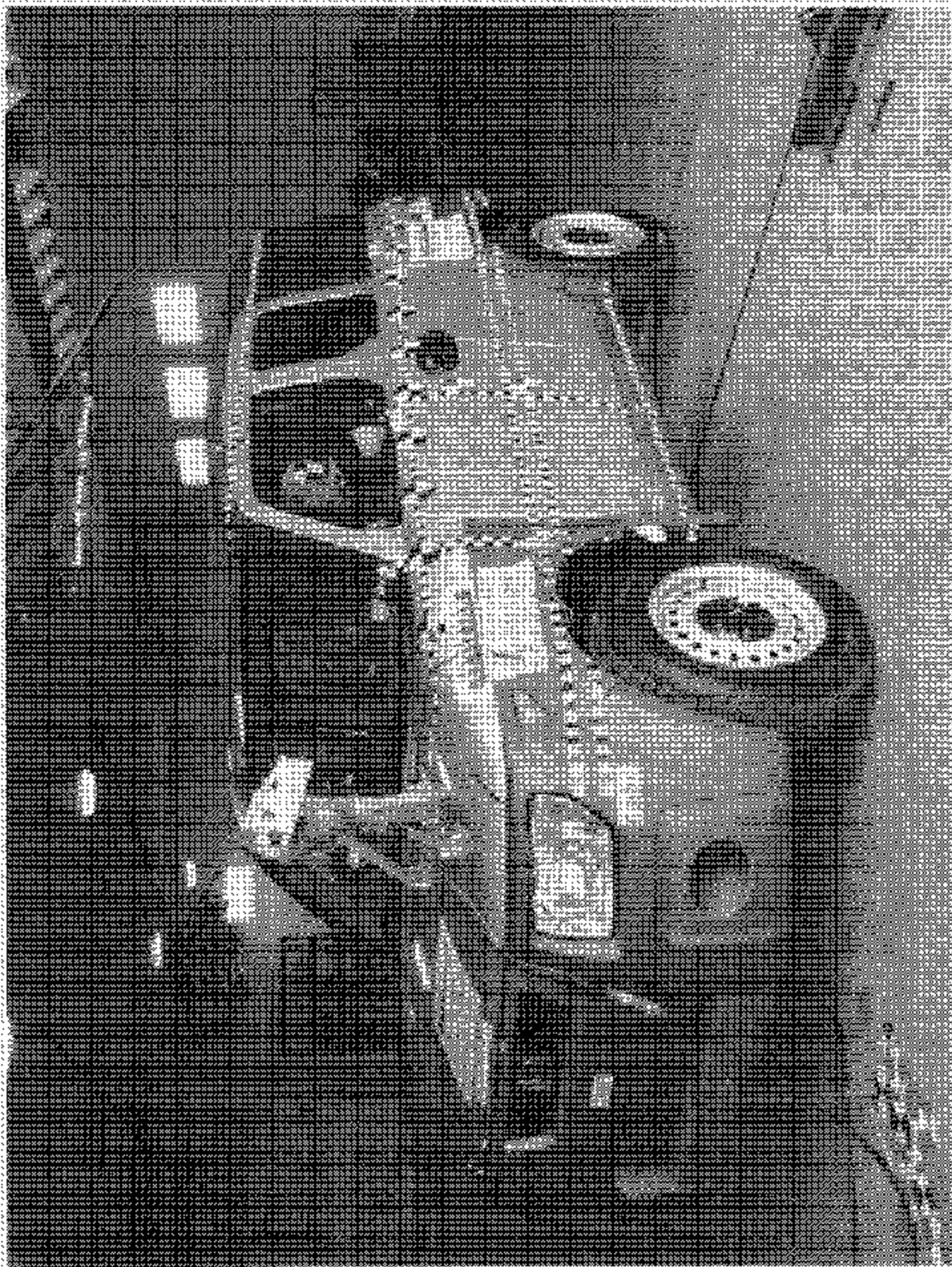


Figure A-2 PRE-TEST FRONT VIEW OF TEST VEHICLE

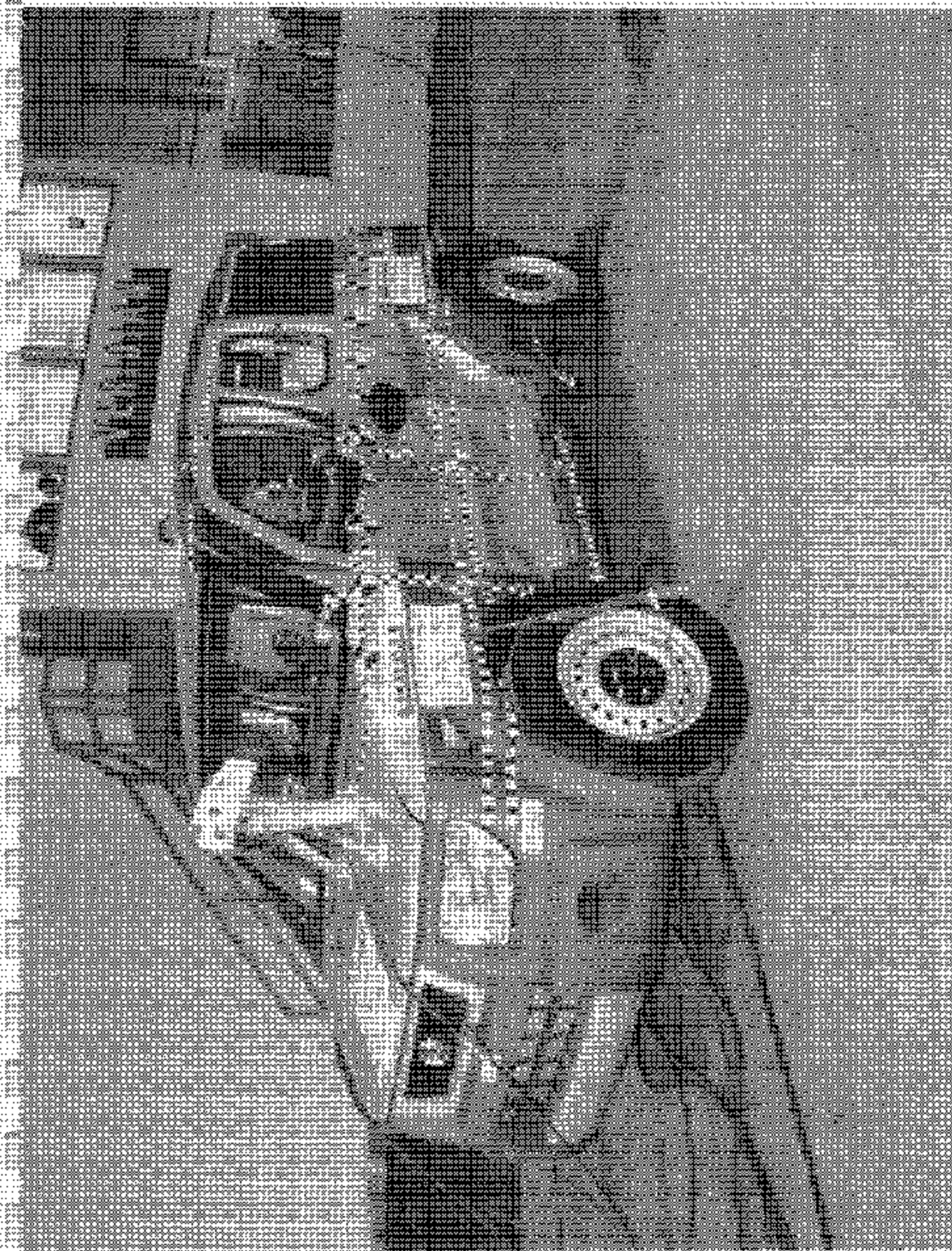


Figure A-30. POST-TEST LEFT FRONT VIEW OF TEST VEHICLE

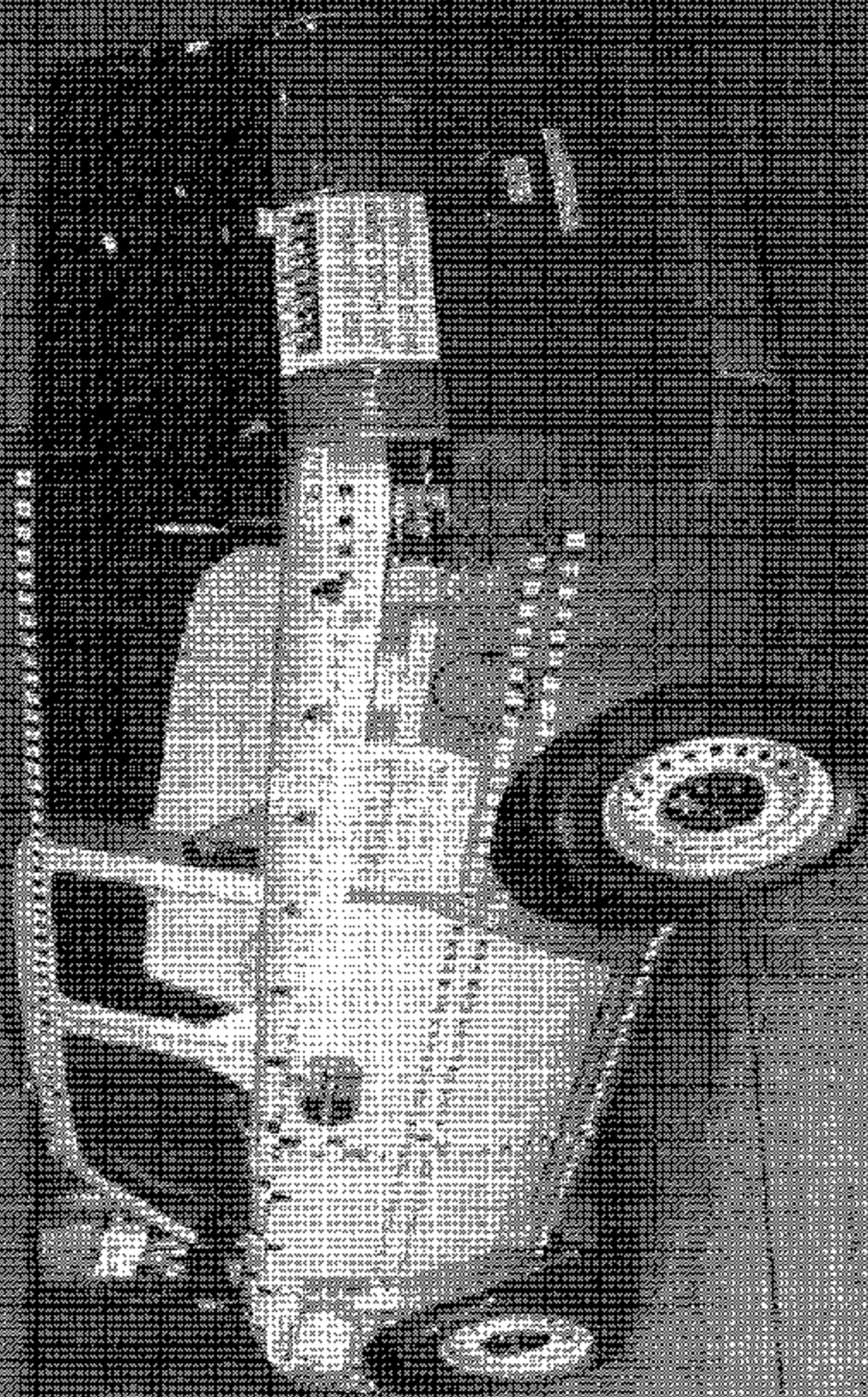


FIGURE A-9 PRE-TEST LEFT REAR VIEW OF TEST VEHICLE

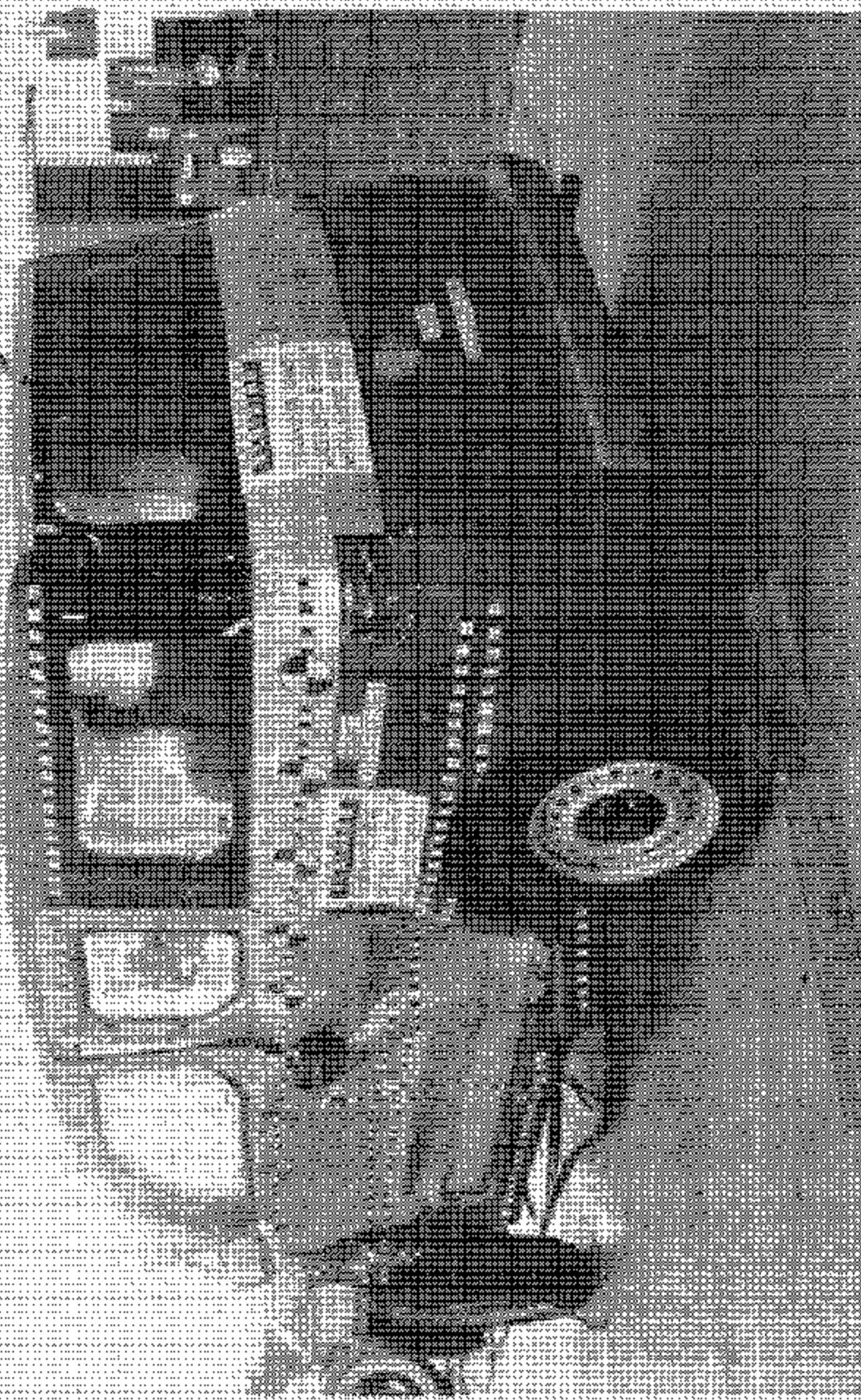


Figure A-10: Post-Test Left Rear View of Test Vehicle

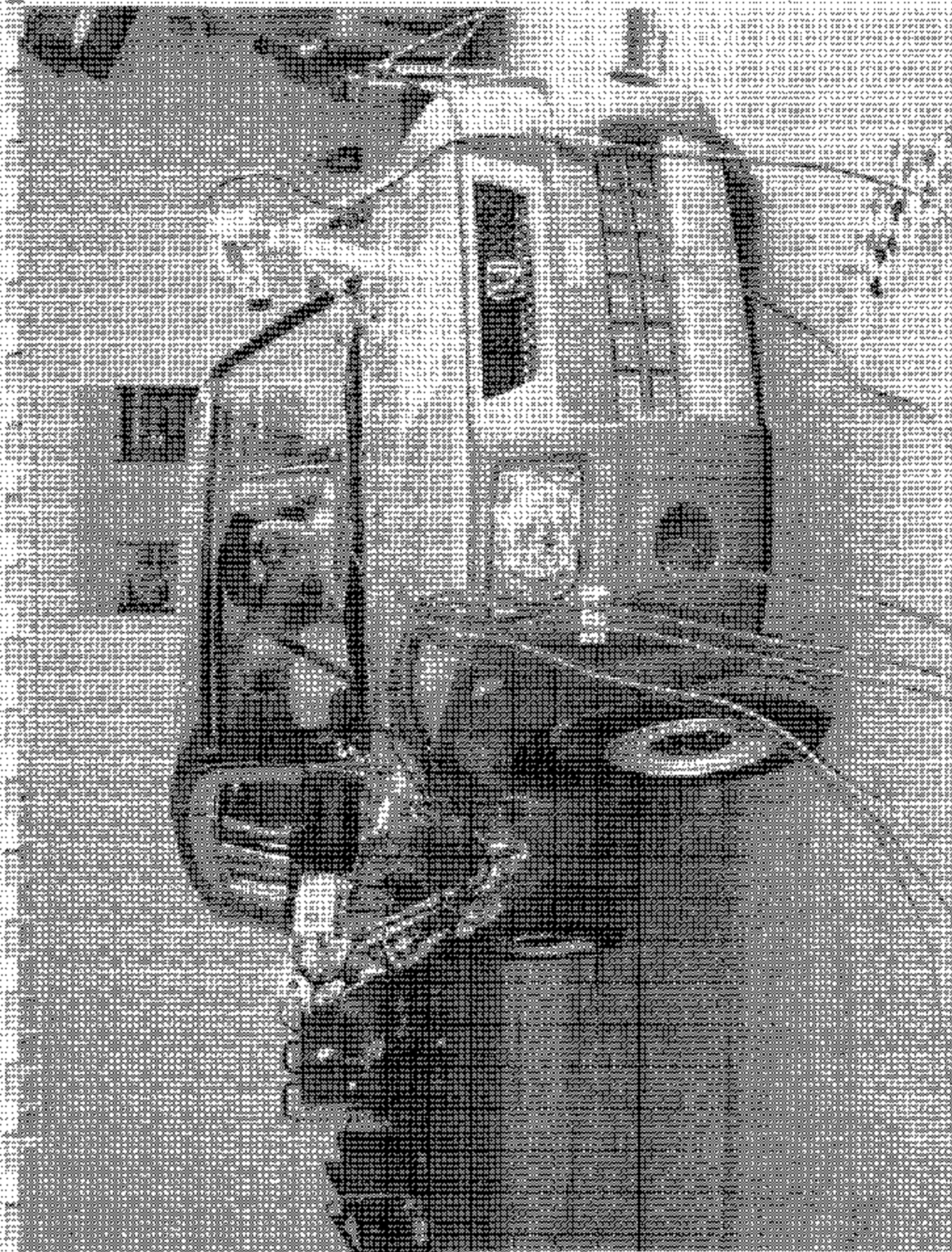


Figure A-1: PRE-TEST RIGHT FRONT VIEW OF TEST VEHICLE

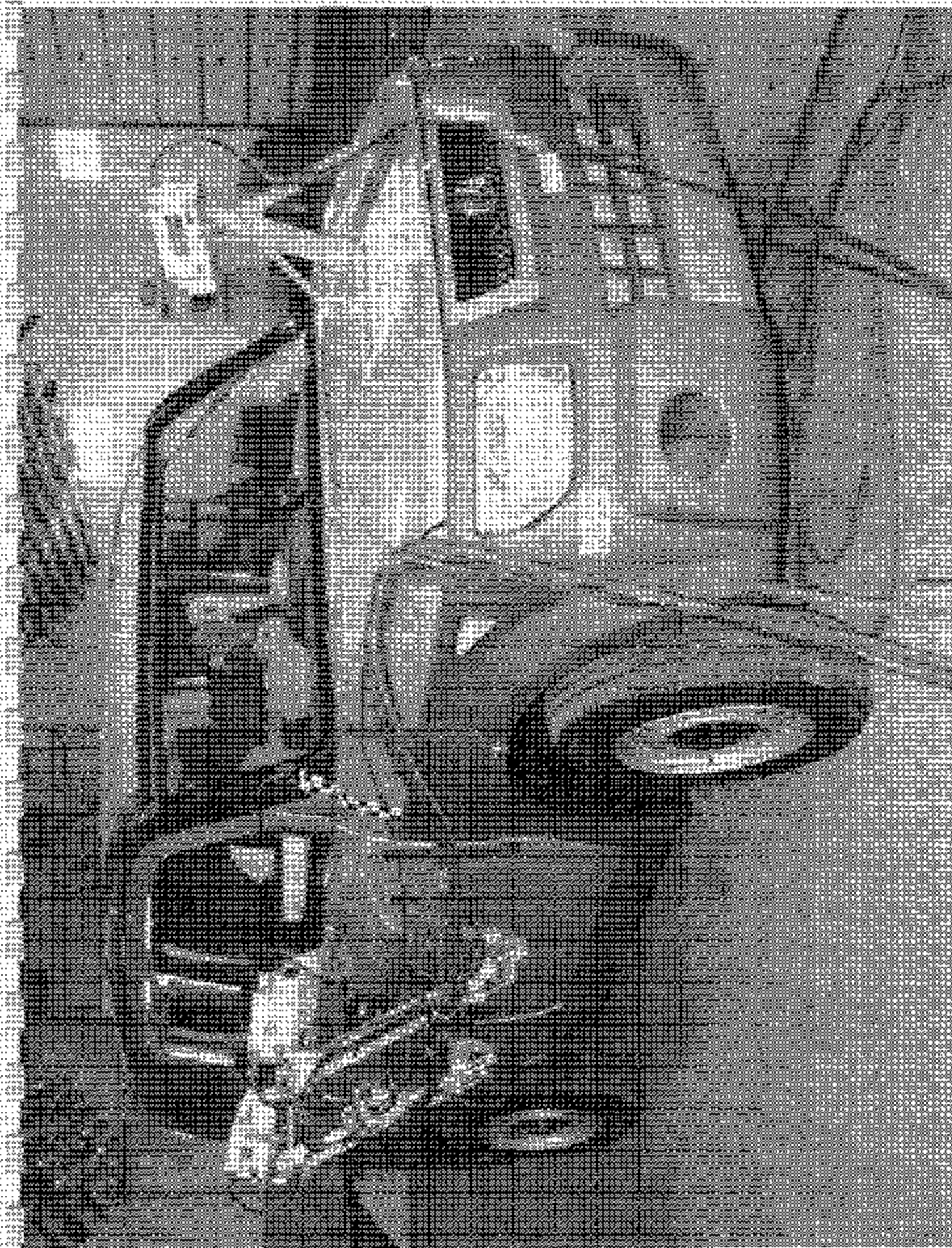
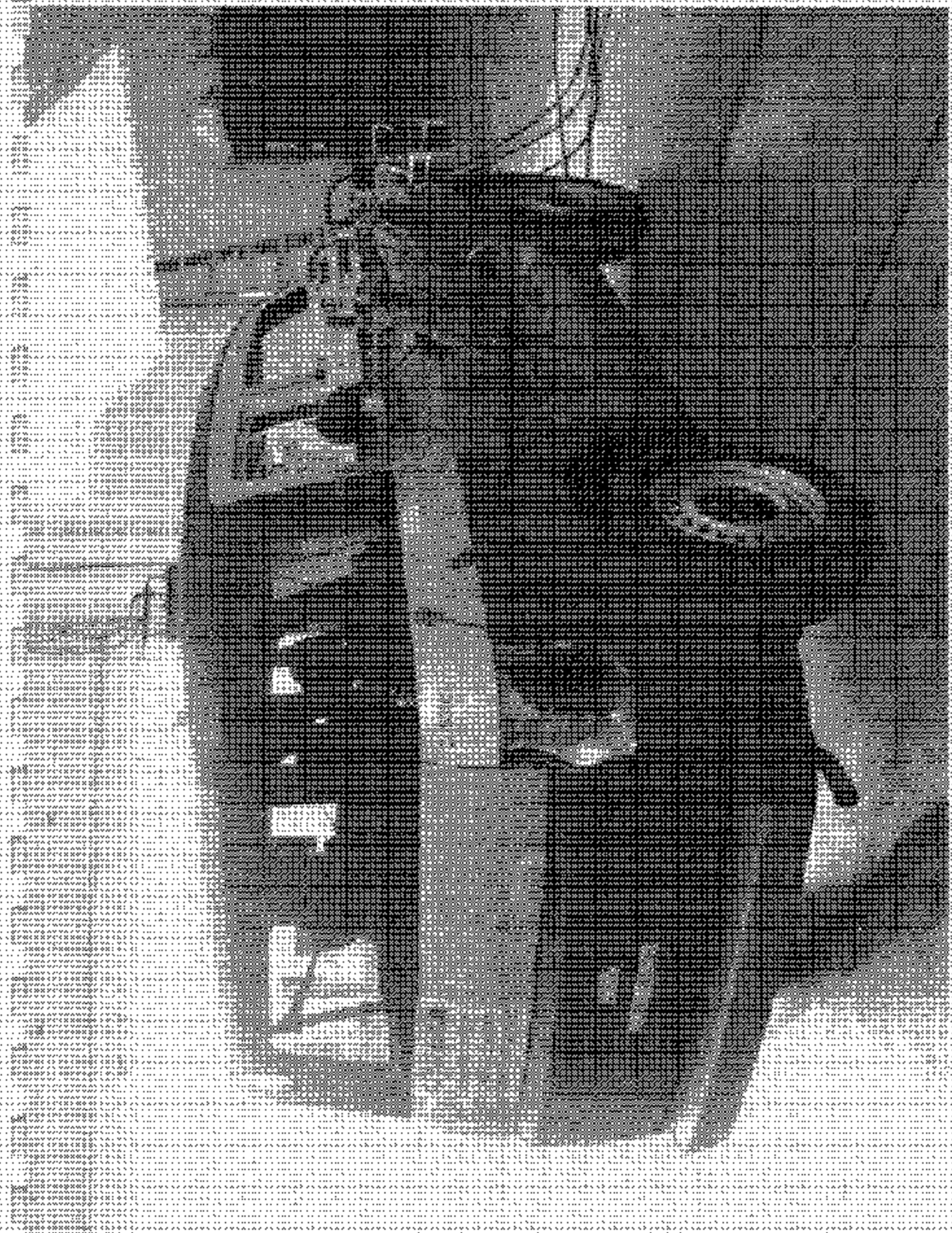


FIGURE 12. PNEUMATIC TIRE FROM FRONT VIEW OF TEST VEHICLE



FROM A THREE-DAY NIGHT OAR RUN OFF THE NORTH

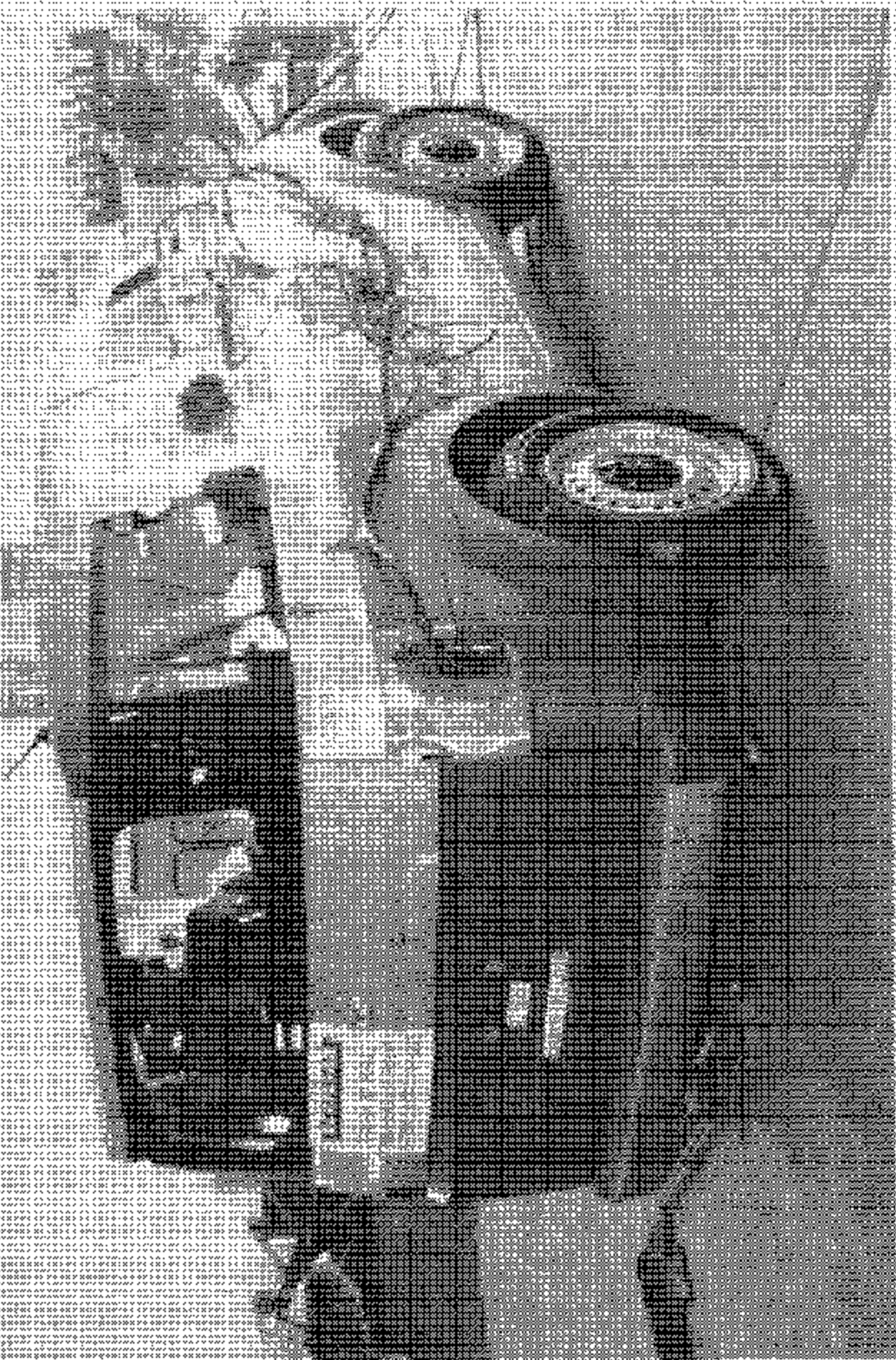


Figure A-14 POSITIVE RIGHT REAR VIEW OF ITEM VEHICLE

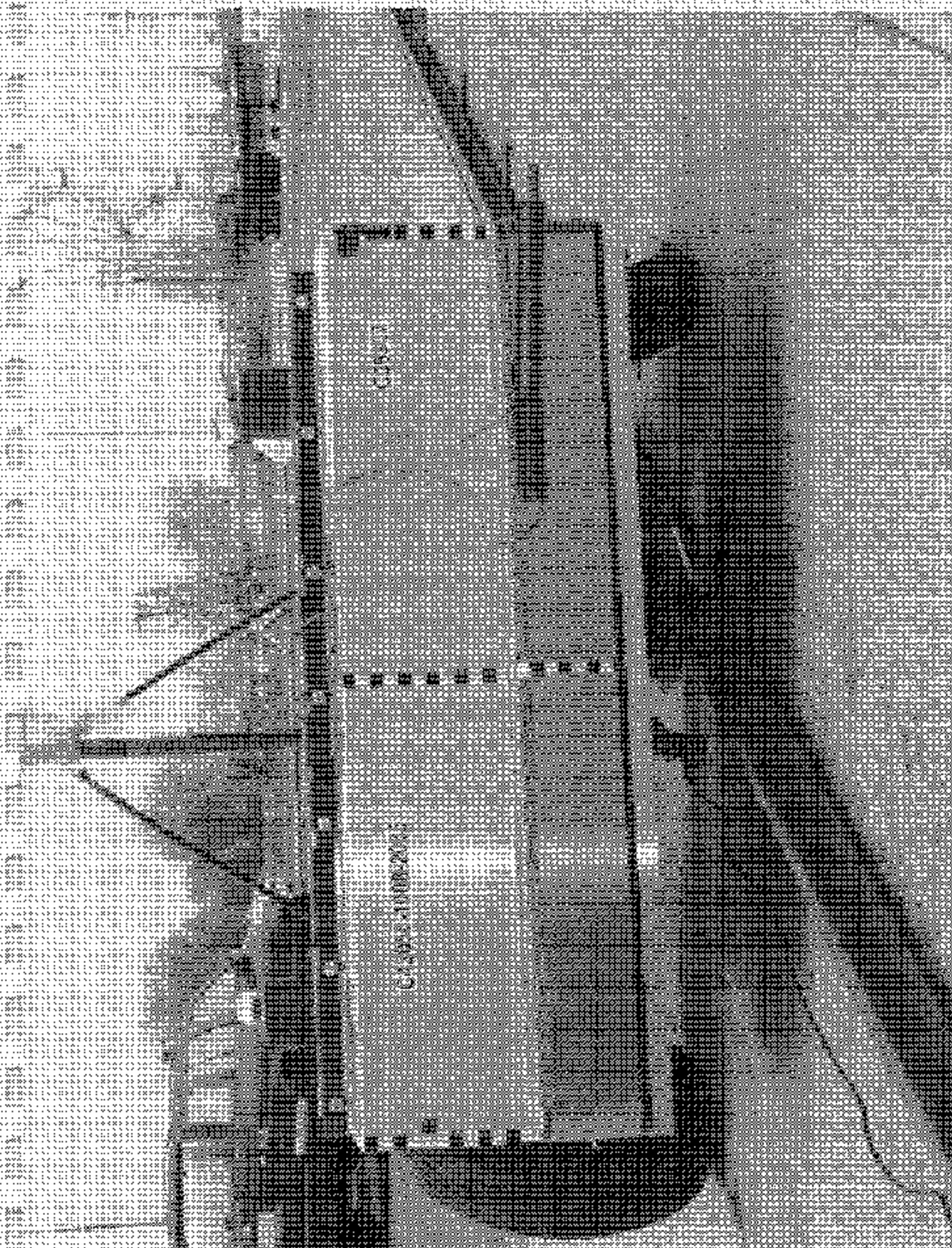


Figure A-4: PRE-TEST BENTONITE VIEW OF EXTRACTOR LACE

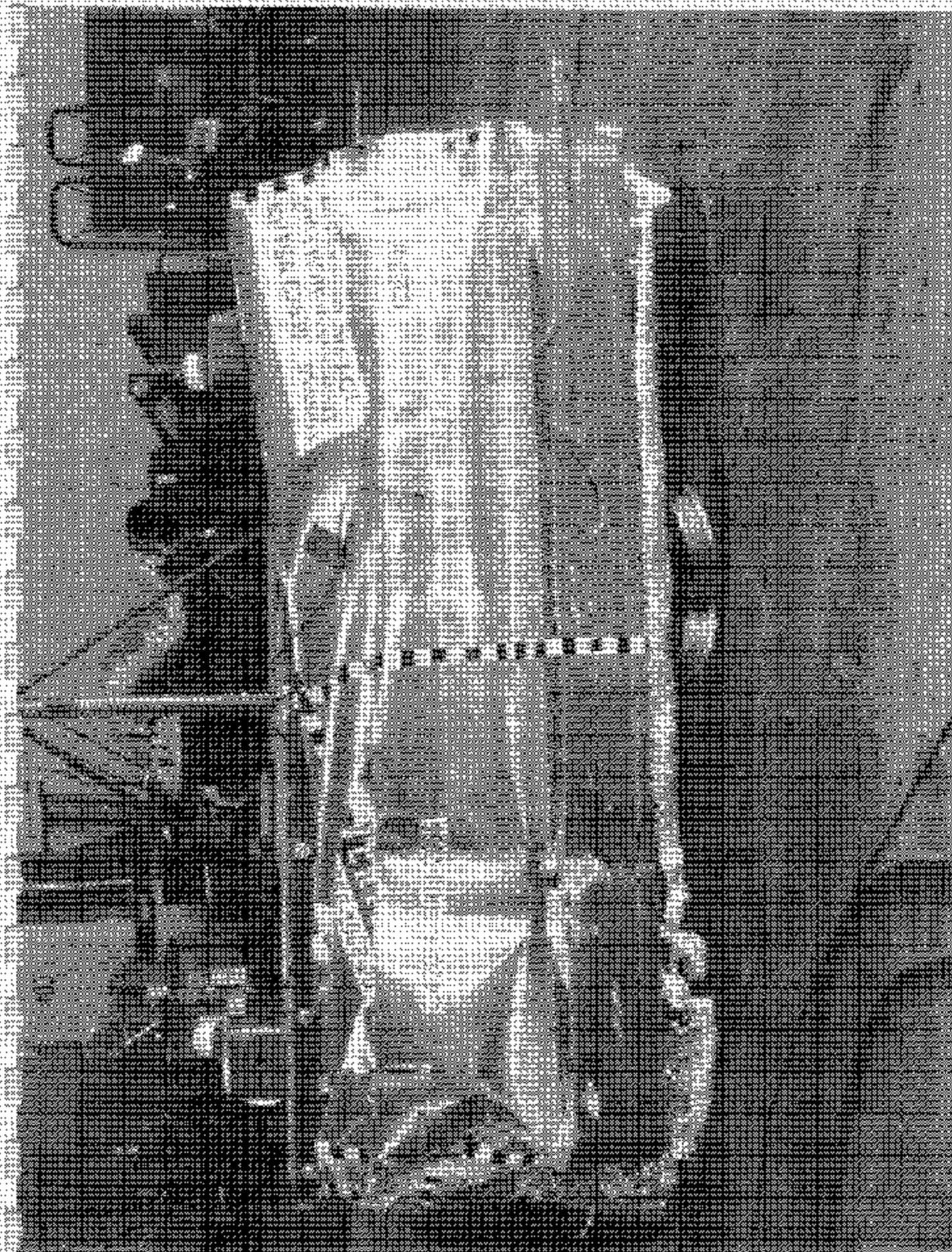


Figure 5-16: Post-Tensioning View of Concrete Bridge

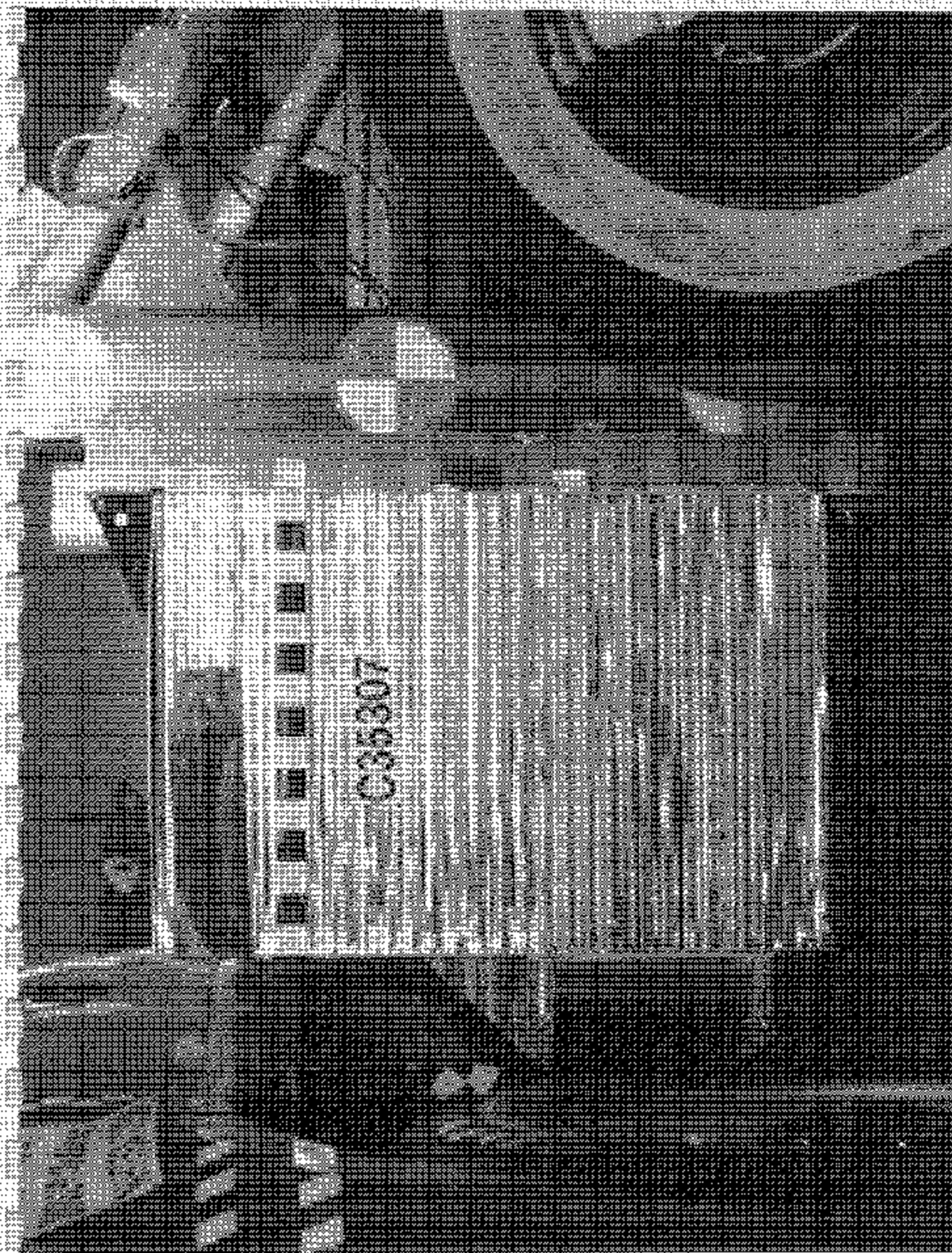


FIGURE A-1: FIRE-TESTED LEFT SIDE VIEW OF DRY TON FACH

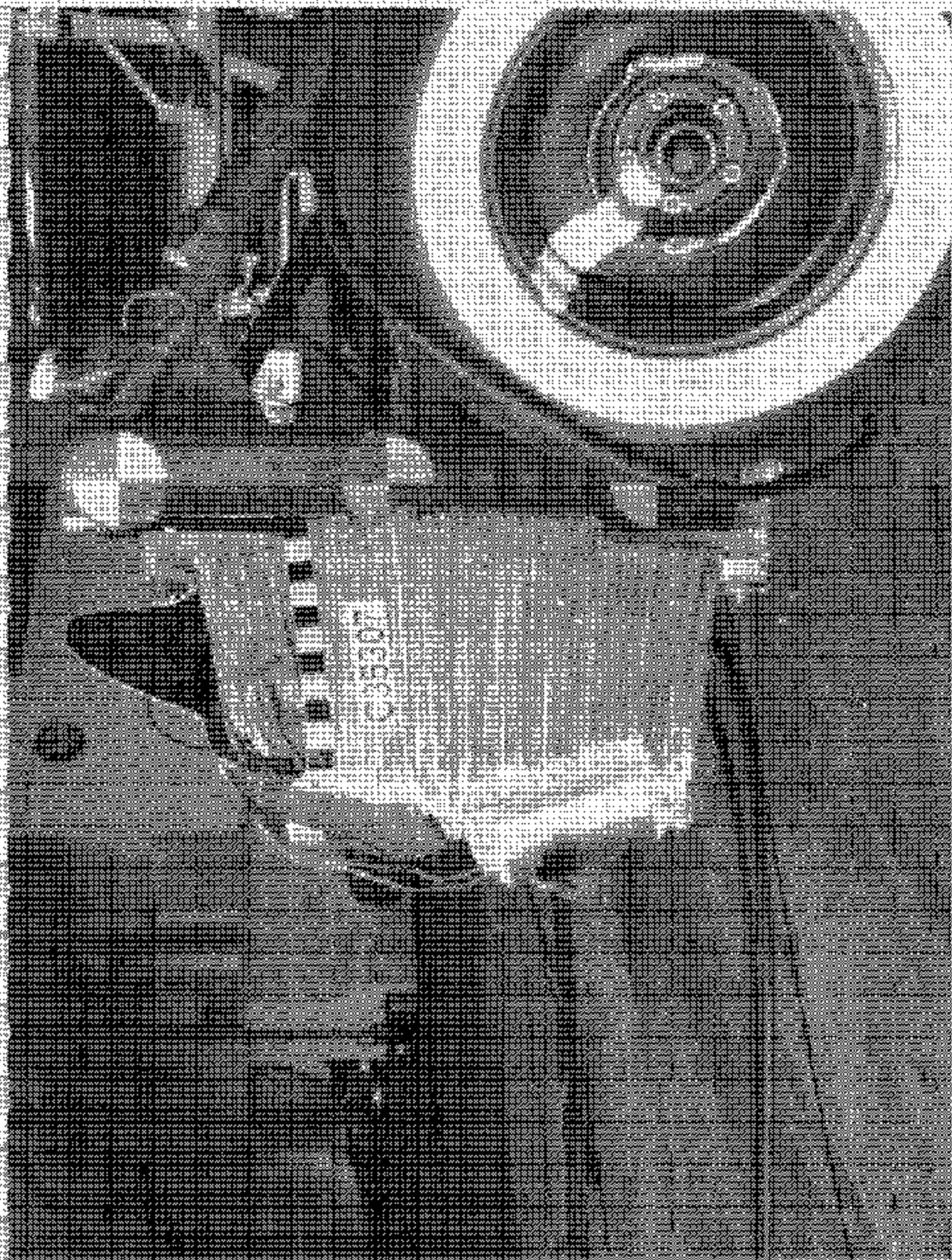


Figure A-18 POST-TEST INSIDE VIEW OF IMPACTOR FACE

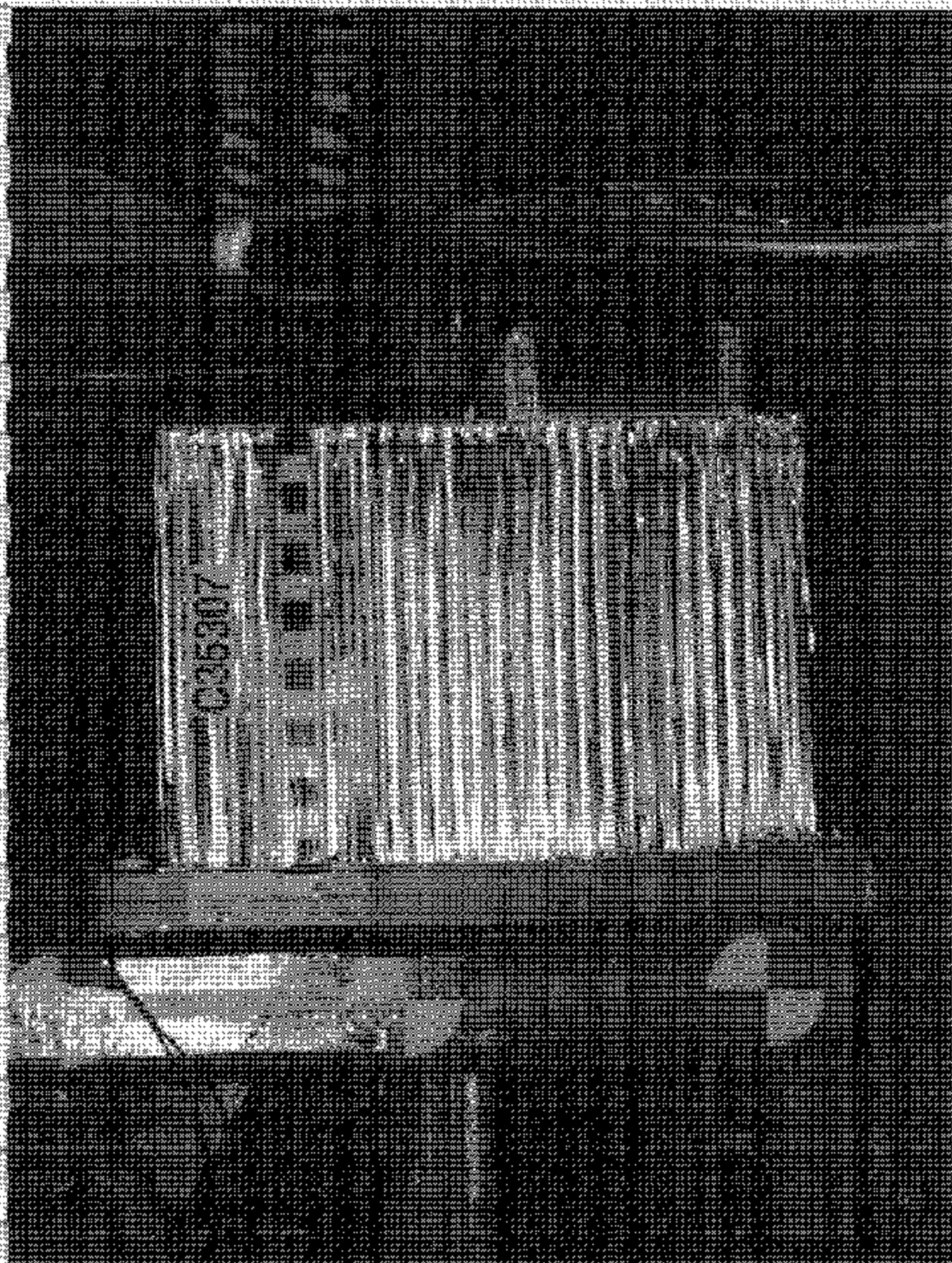


Figure 19. PRE-TEST RIGHT SIDE VIEW OF IMPACTOR PACT

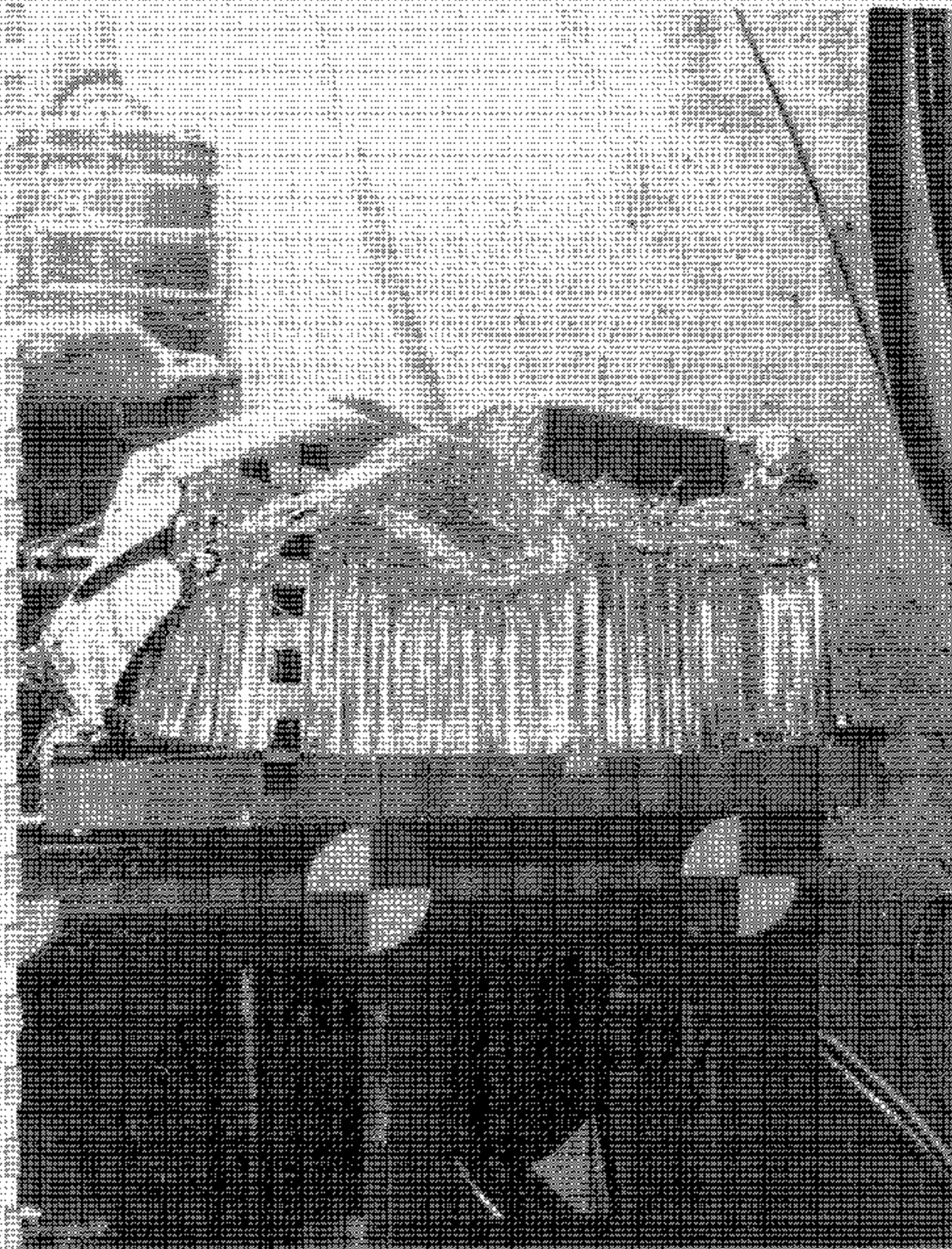


Figure 3-20 POST TEST RIGHT SIDE VIEW OF IMPACTOR FACE

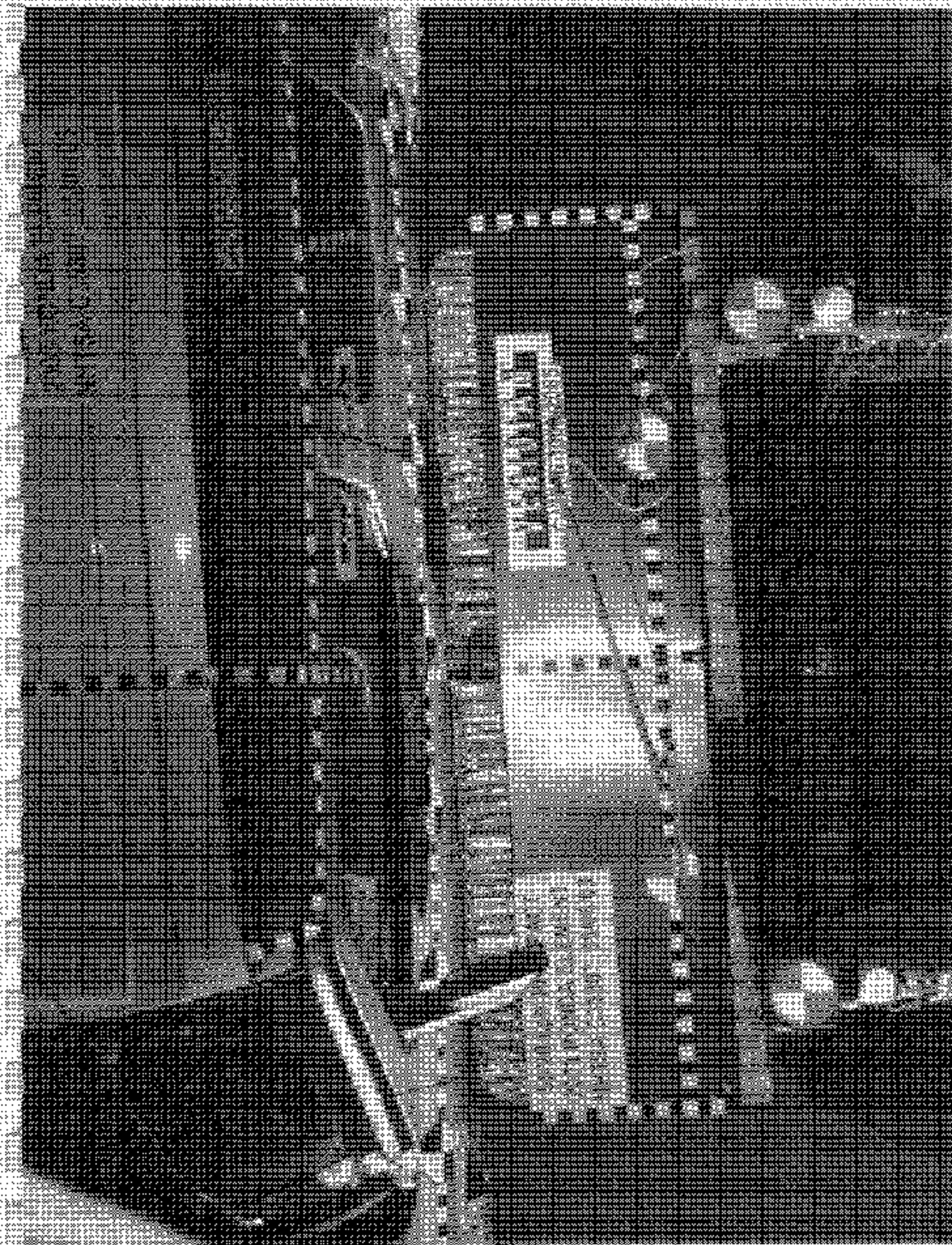
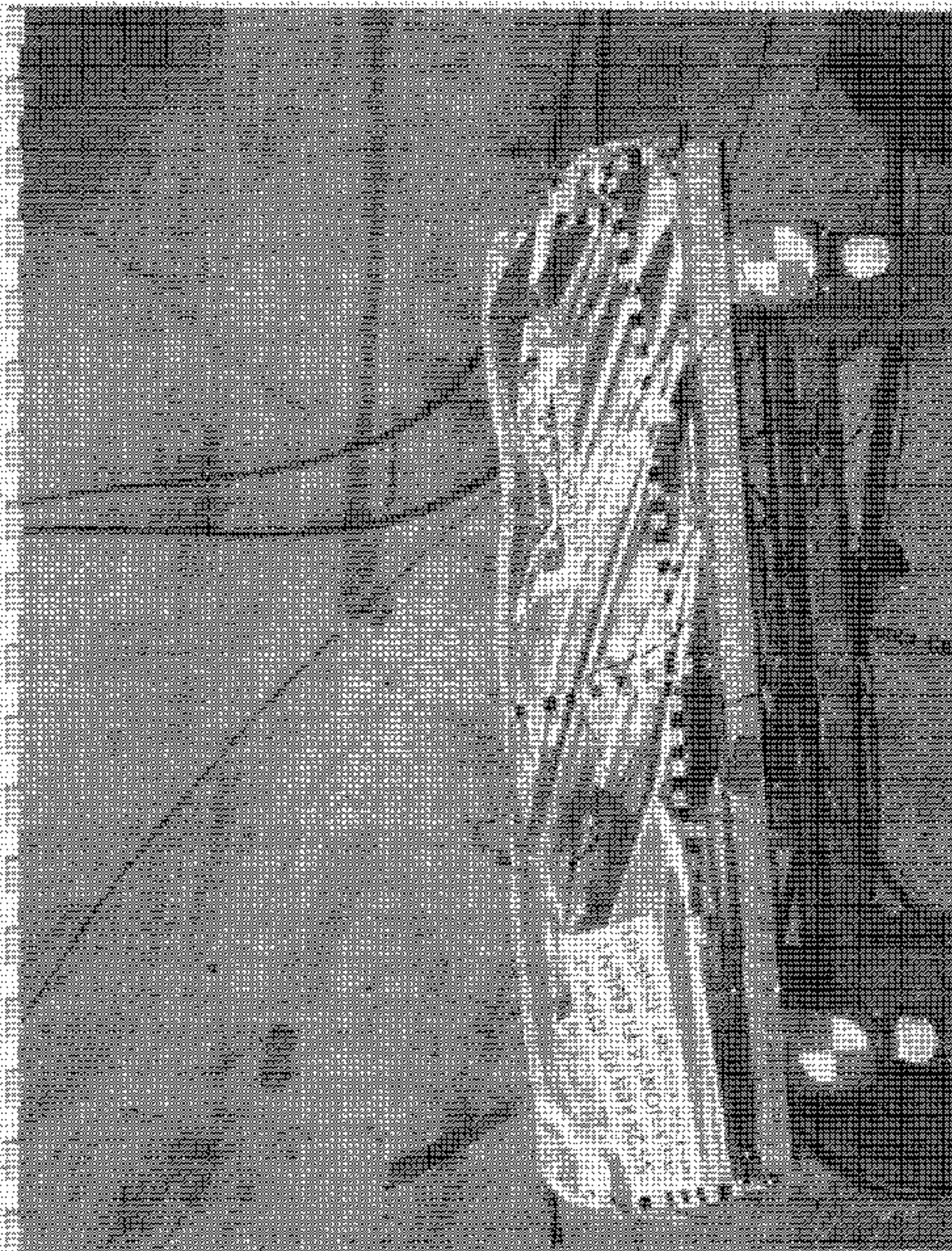


Figure A2.1081 TEST TOP VIEW OF DPA FACTORFACE



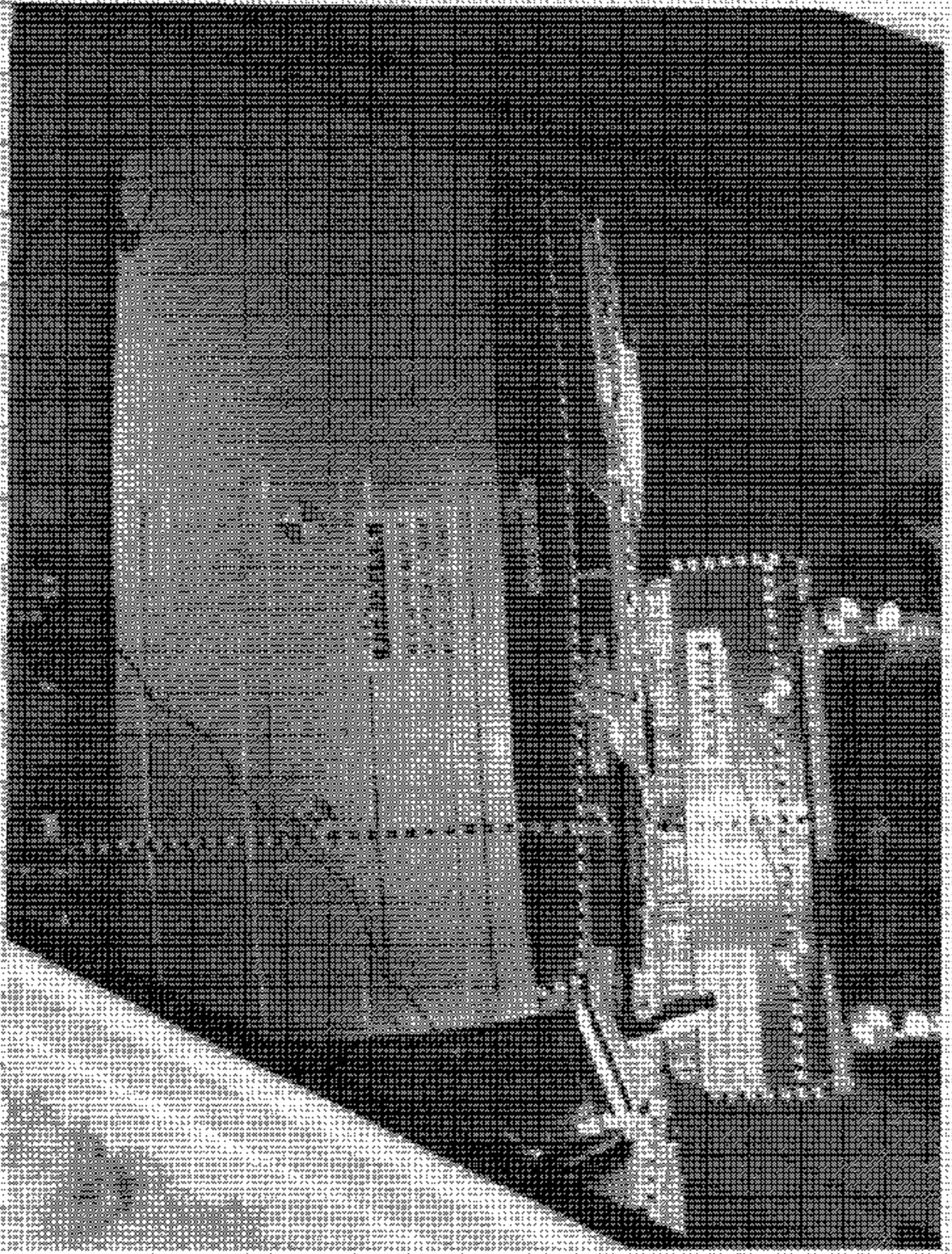


Figure A-10. F-105 OVERHEAD VIEW OF MAIN AIR BASE AND TOWNSHIP

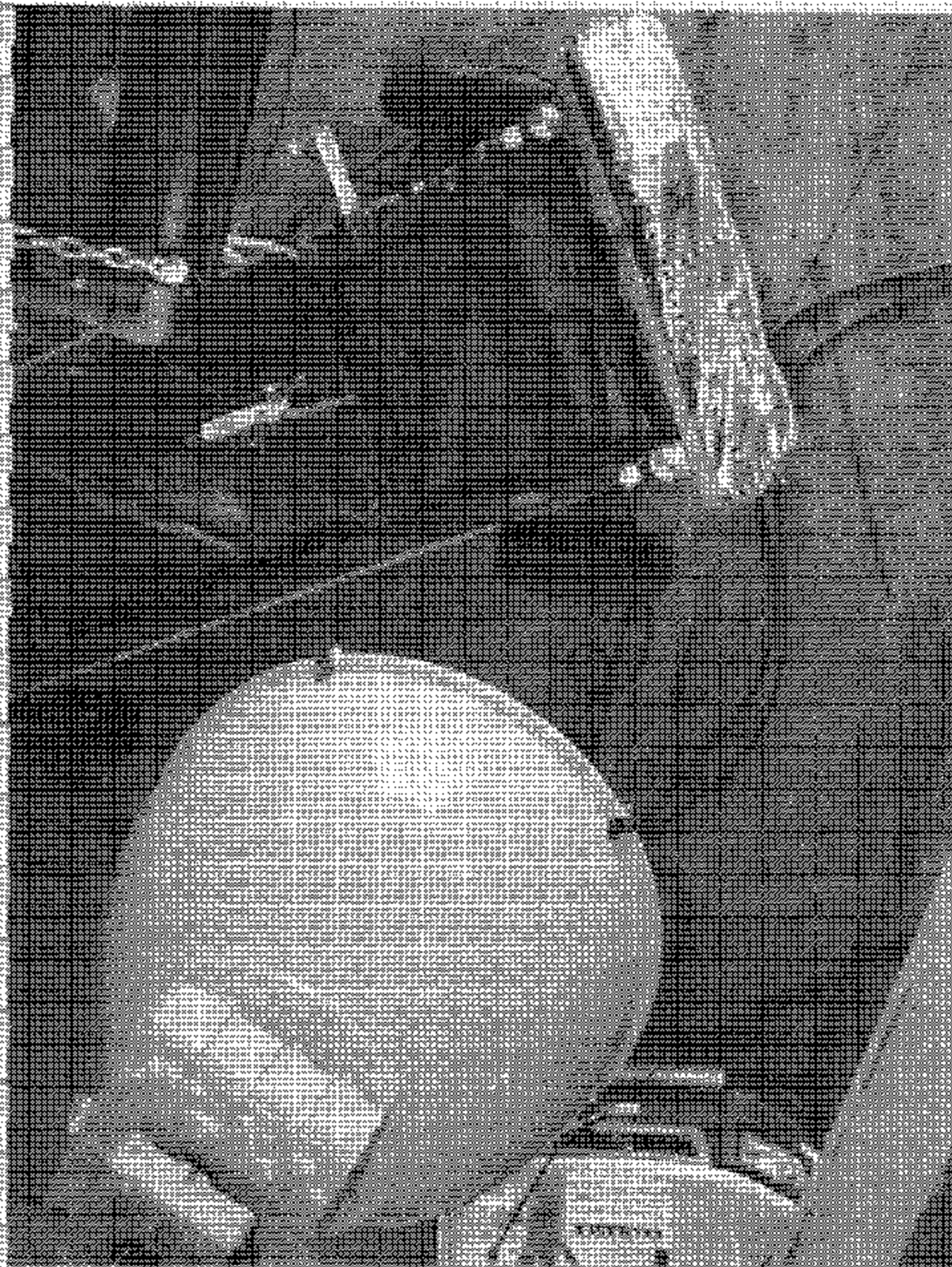


Figure A-24 POSITIVE OVERHEAD VIEW OF MECH AND VEHICLE

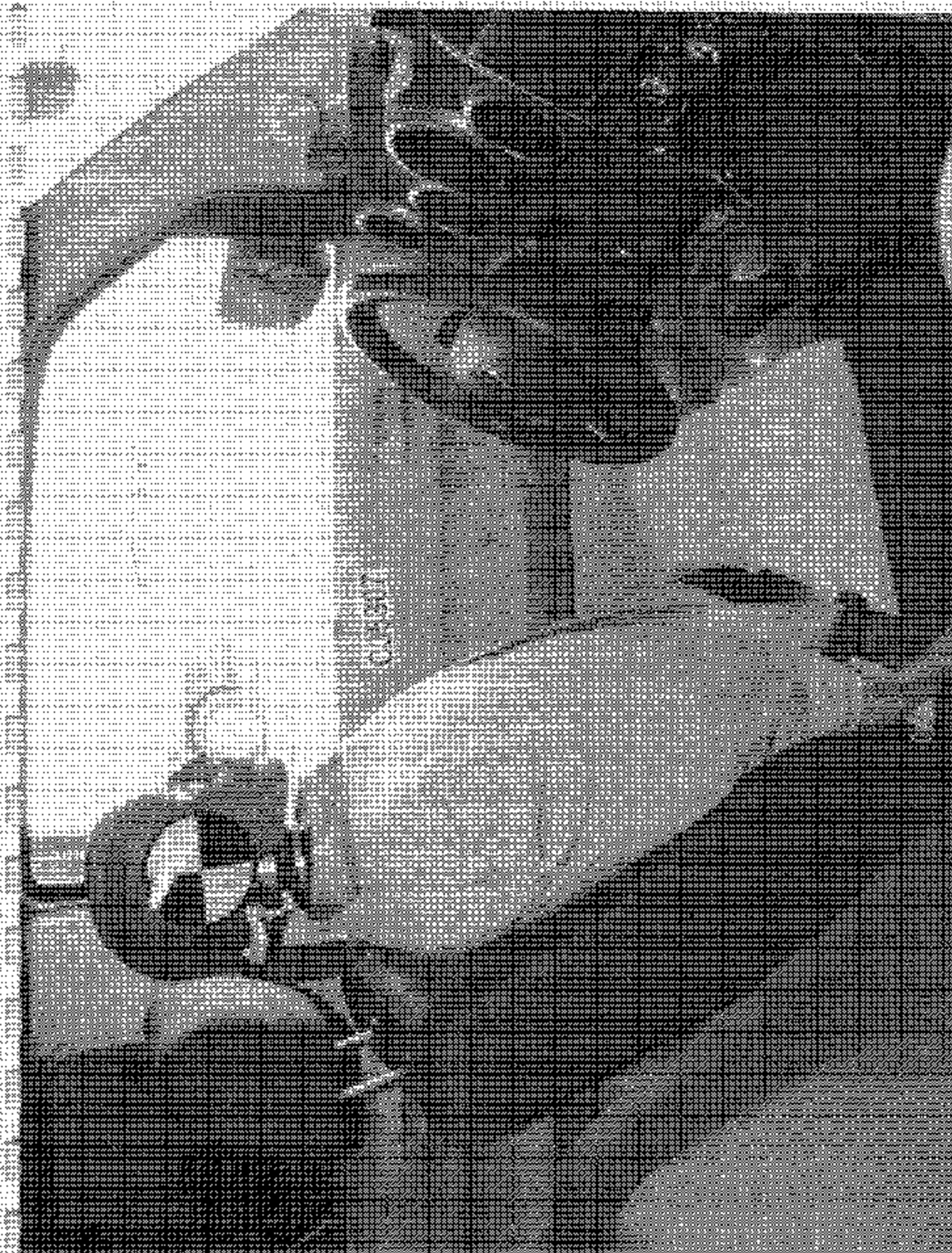


FIGURE 25. PRIESTLY RUGBY OCCUPANT COMPARTMENT IN FW OF FRONT SED IS.

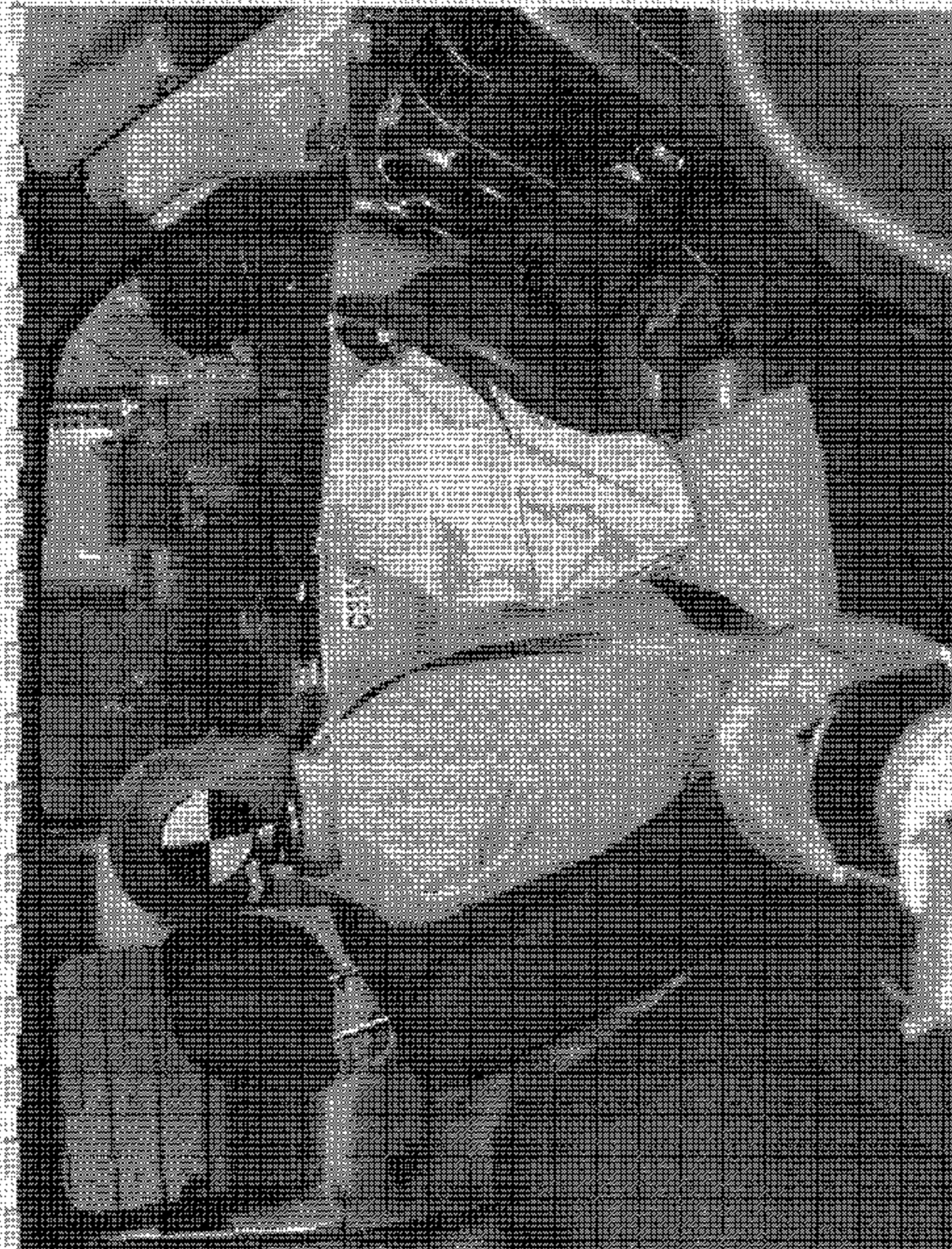


FIGURE 3-28 POSTURE EIGHT OCCUPANT COMPARTMENT VIEW A (FRONT VIEW)

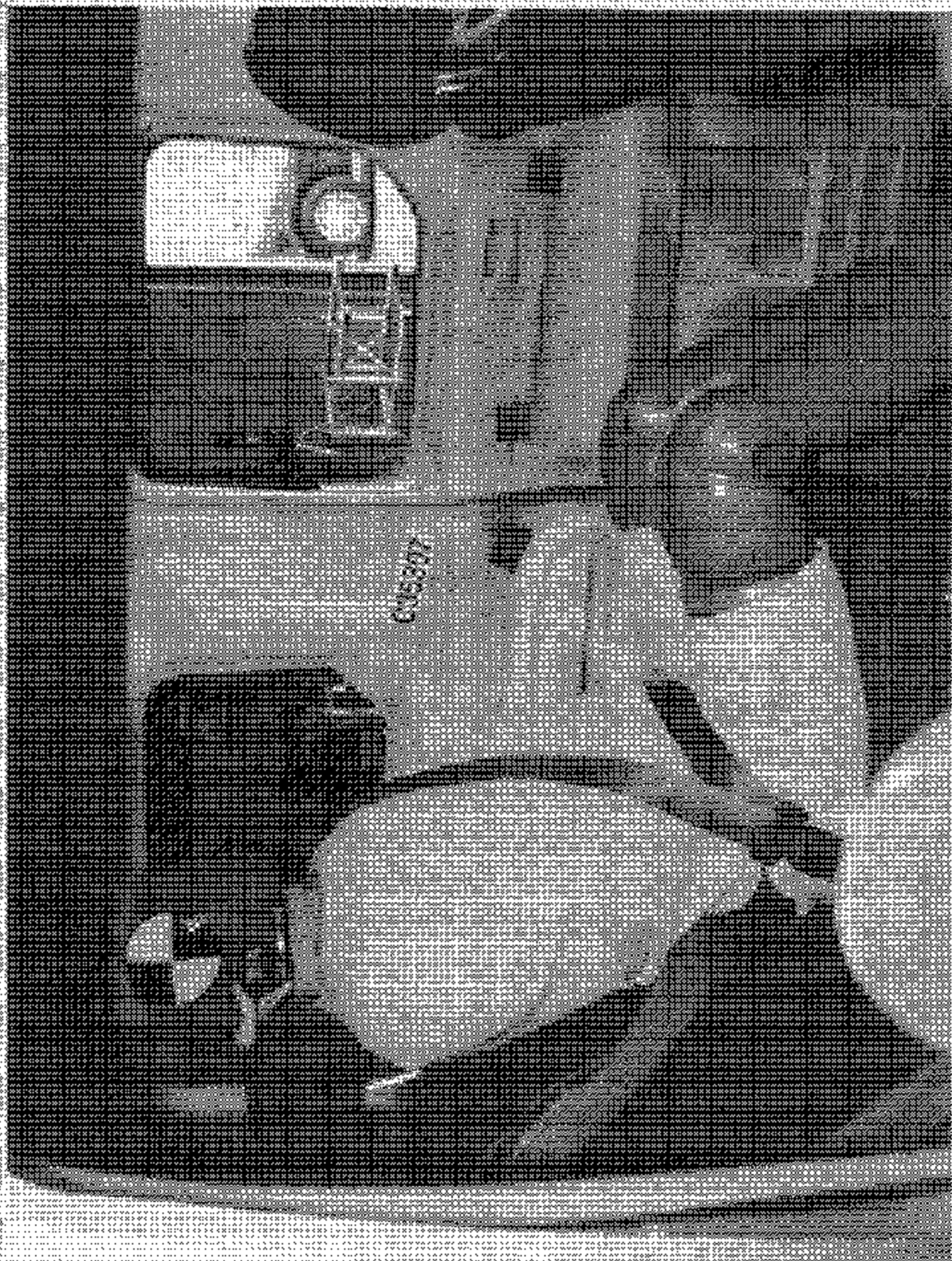


FIGURE 4. JUMP SUIT, RIGHT OF PANT COMPARTMENT VIEW OF REAR SIDE

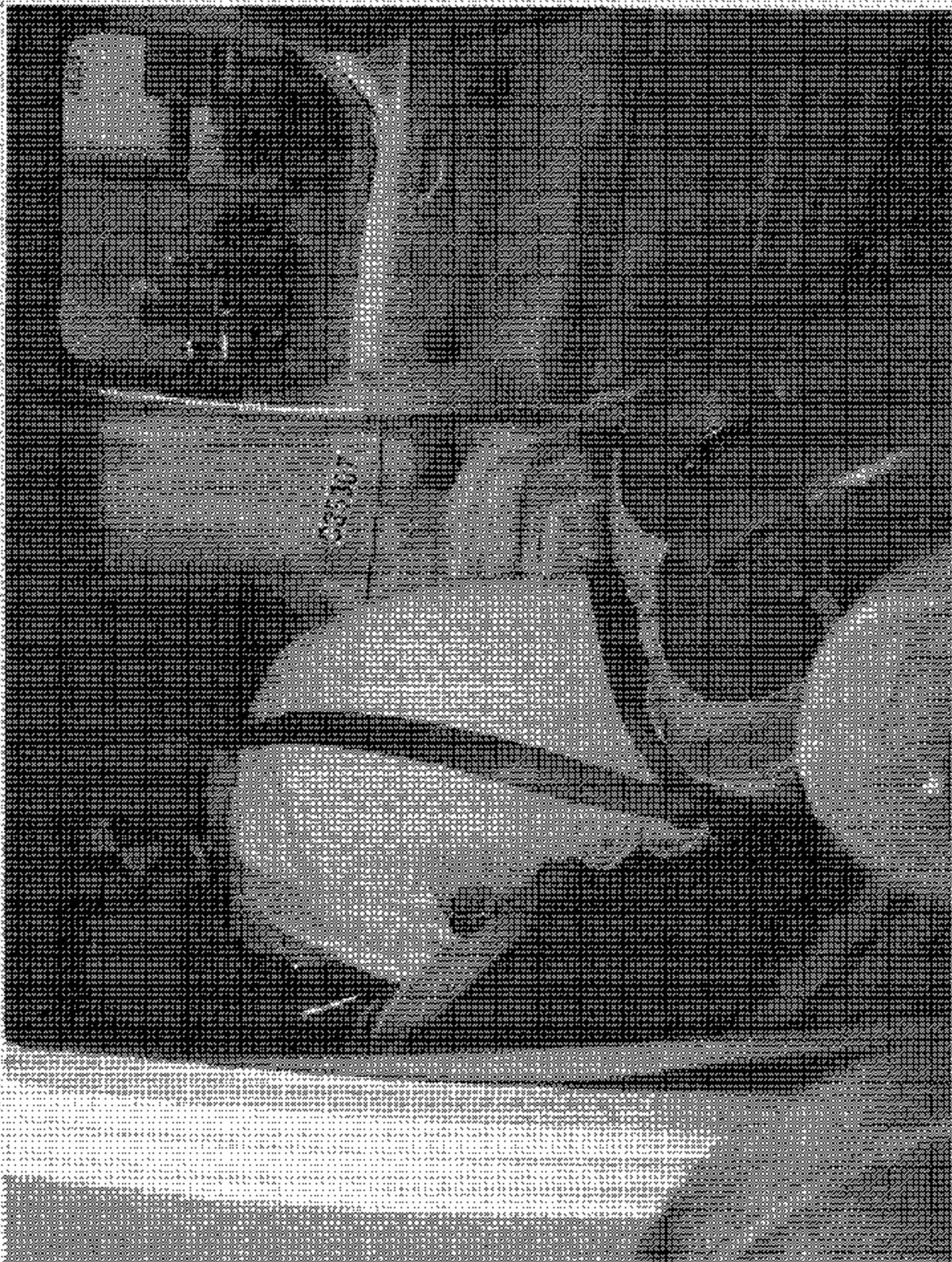


Figure 1. IN FUEL TANK RIGHT CIRCULANT COMPARTMENT VIEW OF REPAIR SIDE

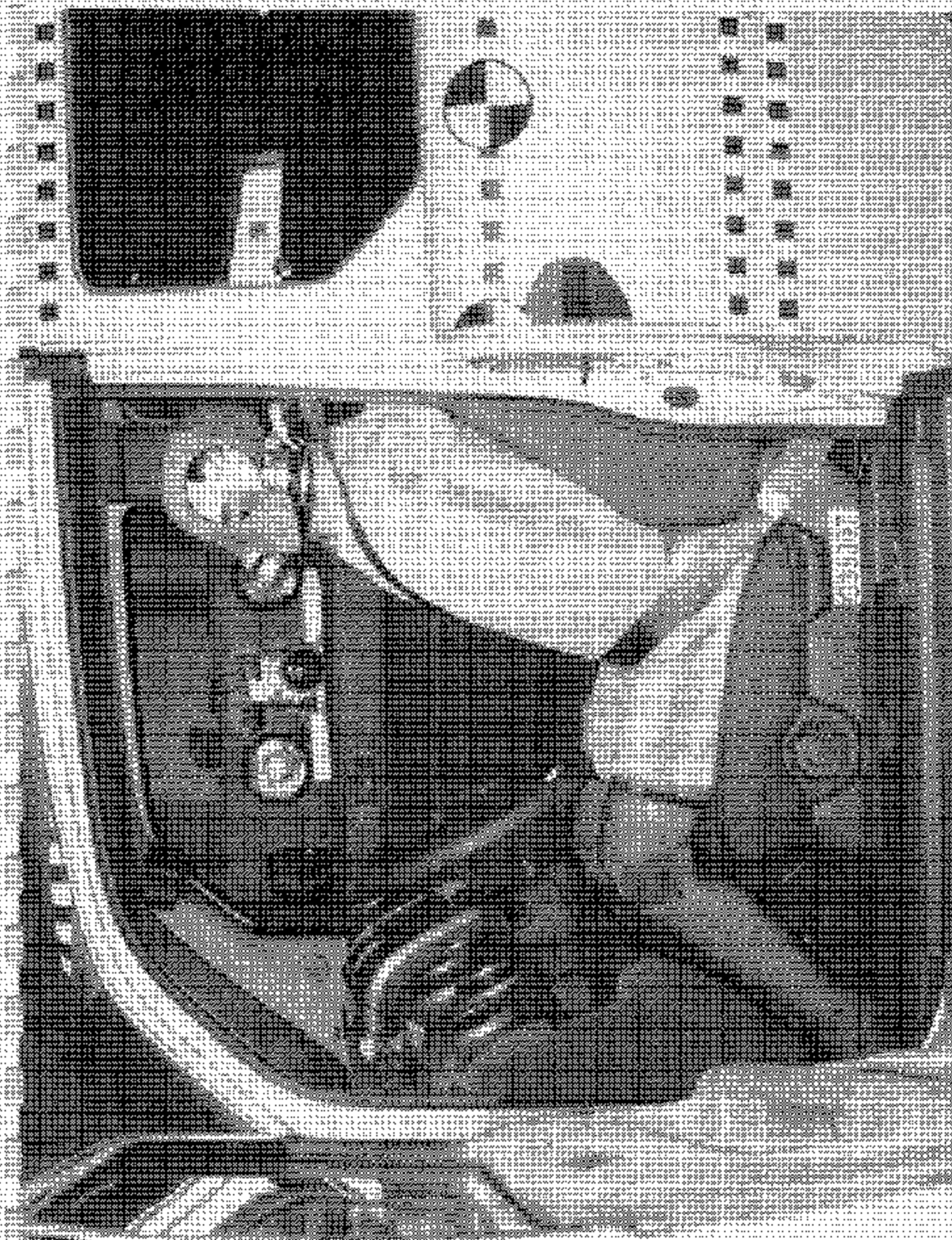


Figure 2-29: REAR-LEFT OCCUPANT COMPARTMENT VIEW IN FRONT SEAT



Figure N-30 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF NOOT SID

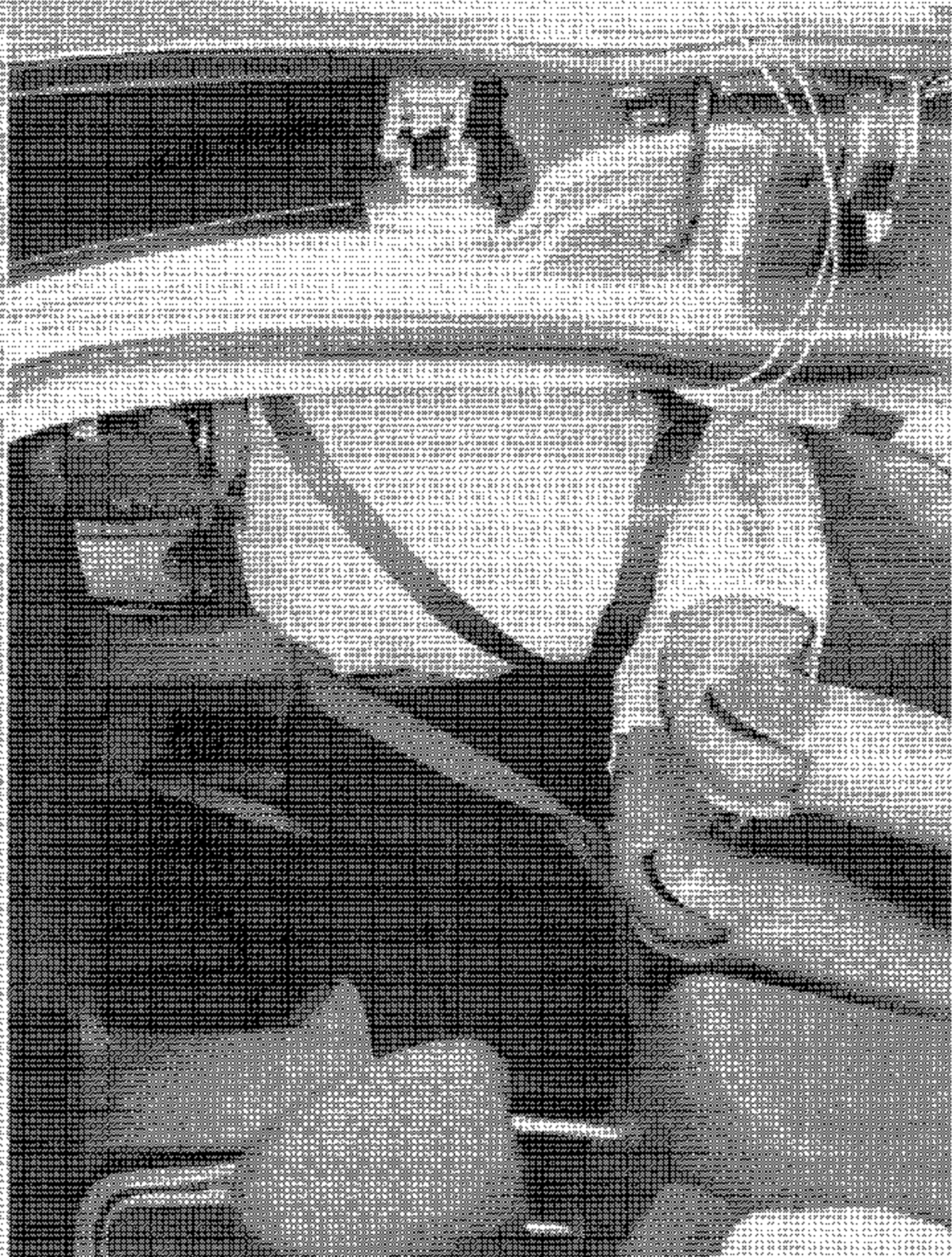
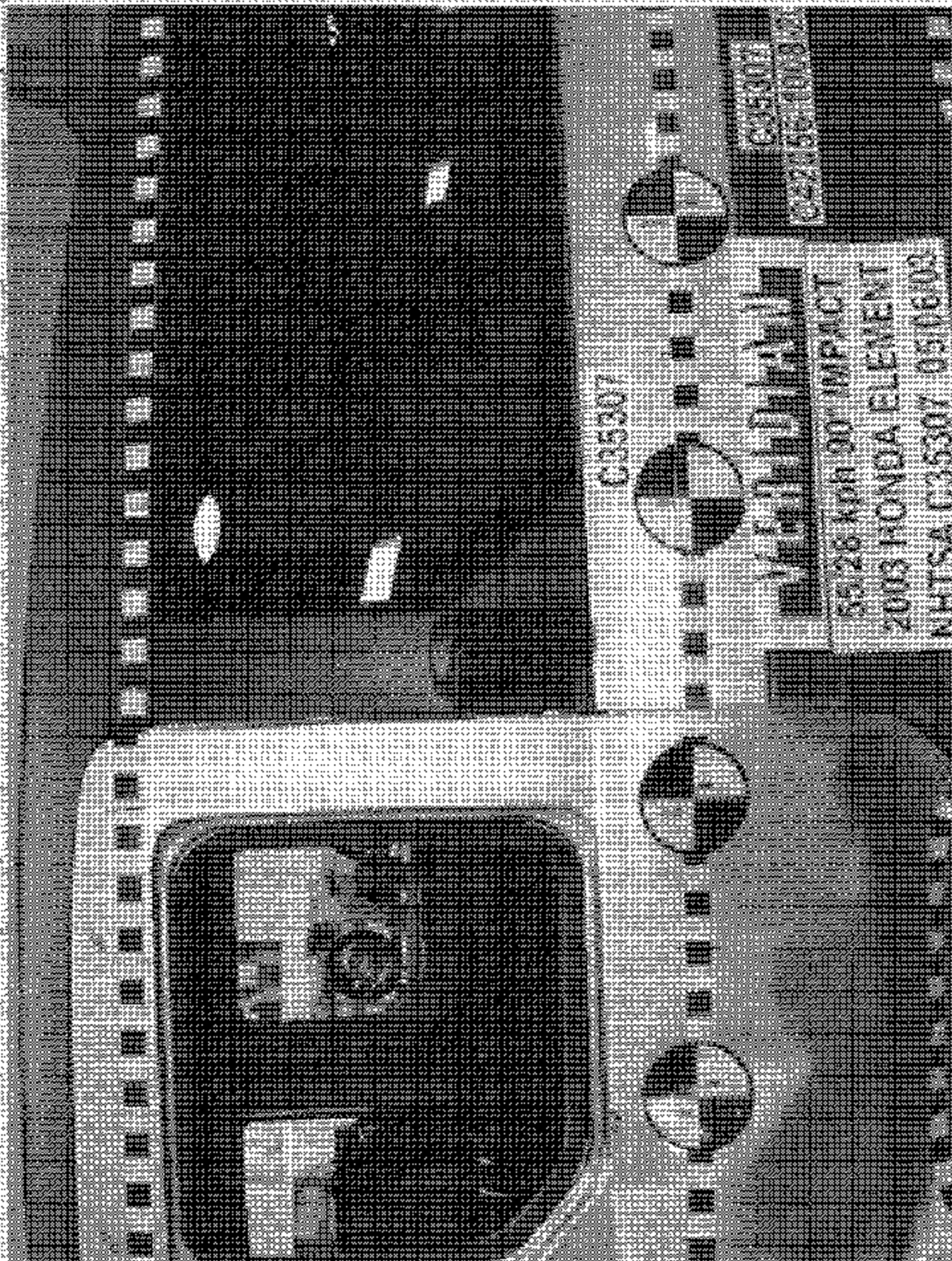


FIGURE 1. LEFT: LIFT OCCUPANT COMPARTMENT VIEW OF REAR SIDE



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HUMSA REPORT TEST LEFT SIDE FRONT VIEW OF REAR SIDE



Figure 4-14105 - FUSION INTERIOR OF 1992 FORD SIERRA 4 DOOR SHOWING FIDHHS IMPACT LOCATIONS

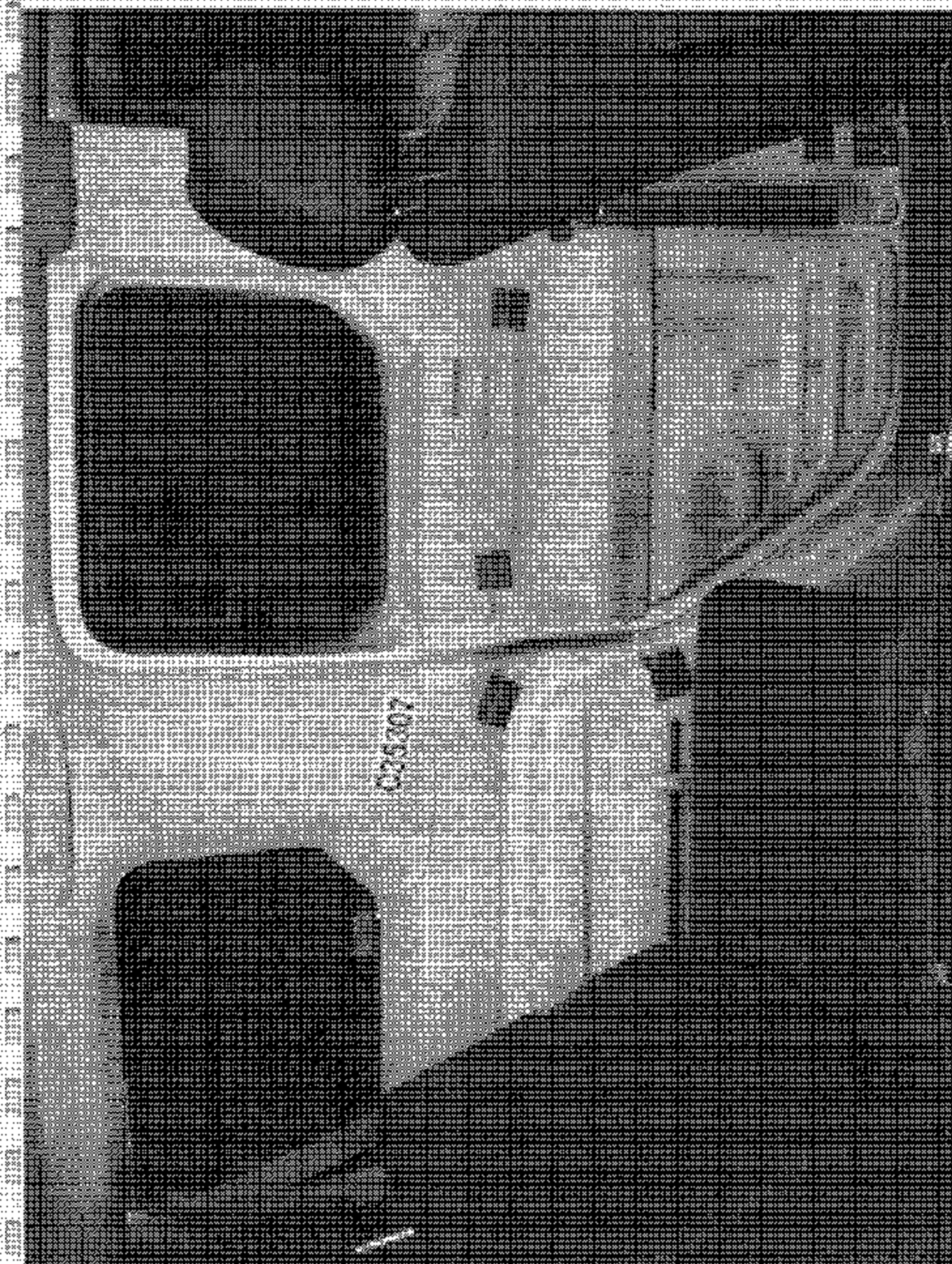


FIGURE 1-10 PHOTOGRAPH OF INTERIOR OF REAR DOOR

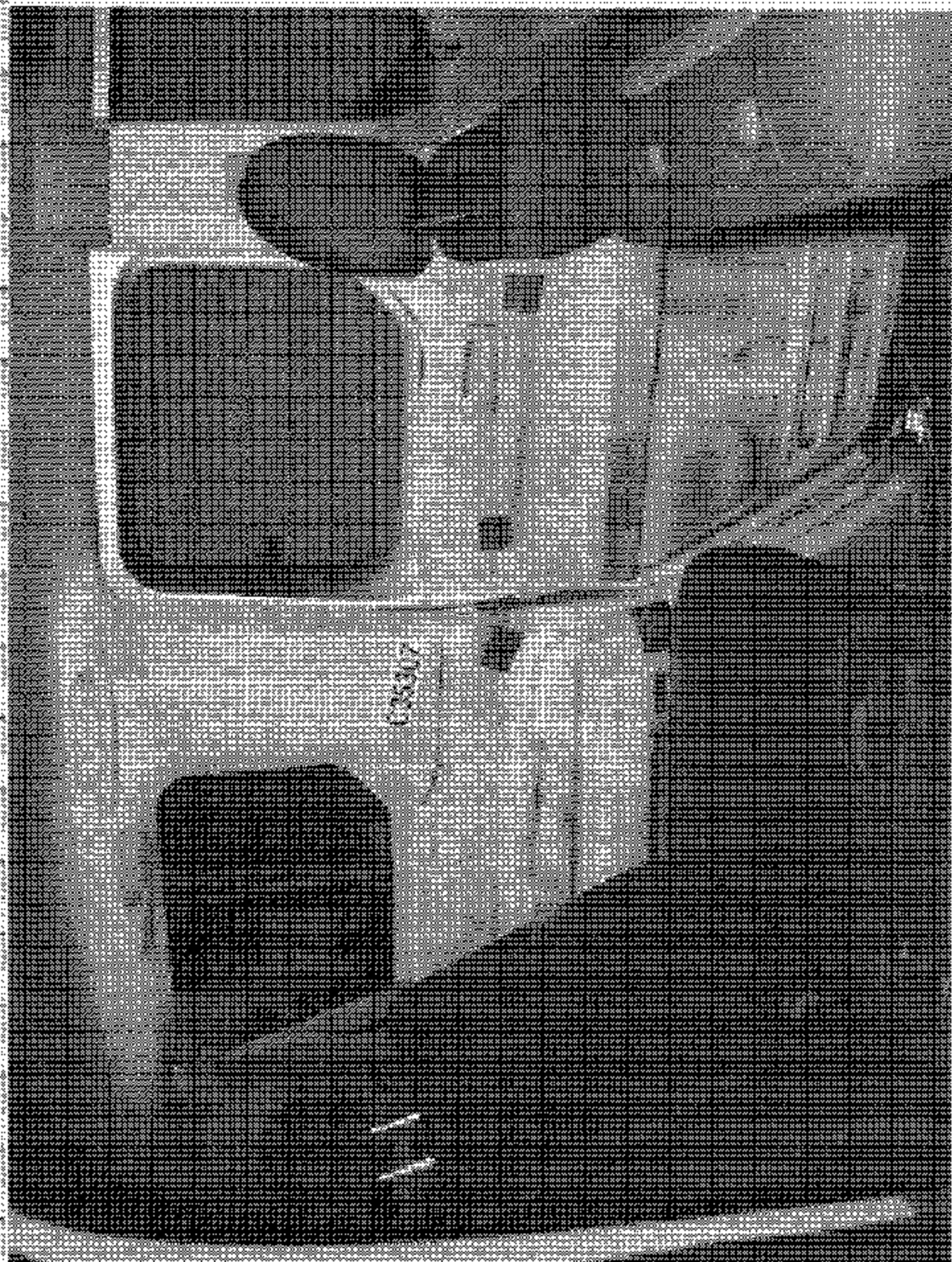
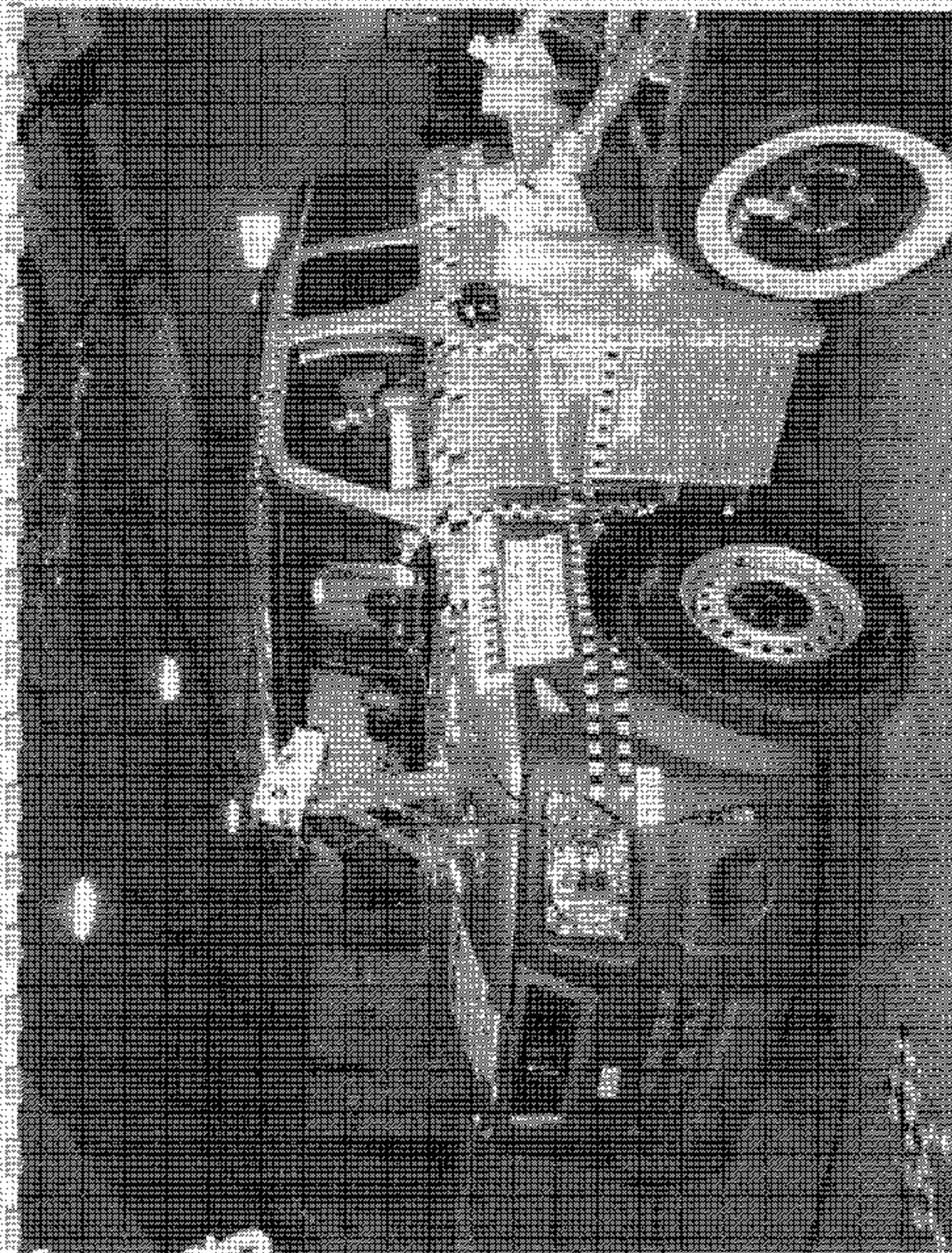


FIGURE 1. A PATIENT WITH INTENSE PAIN OF NEAR 100% SHOWING SEVERE HEAD TILTS



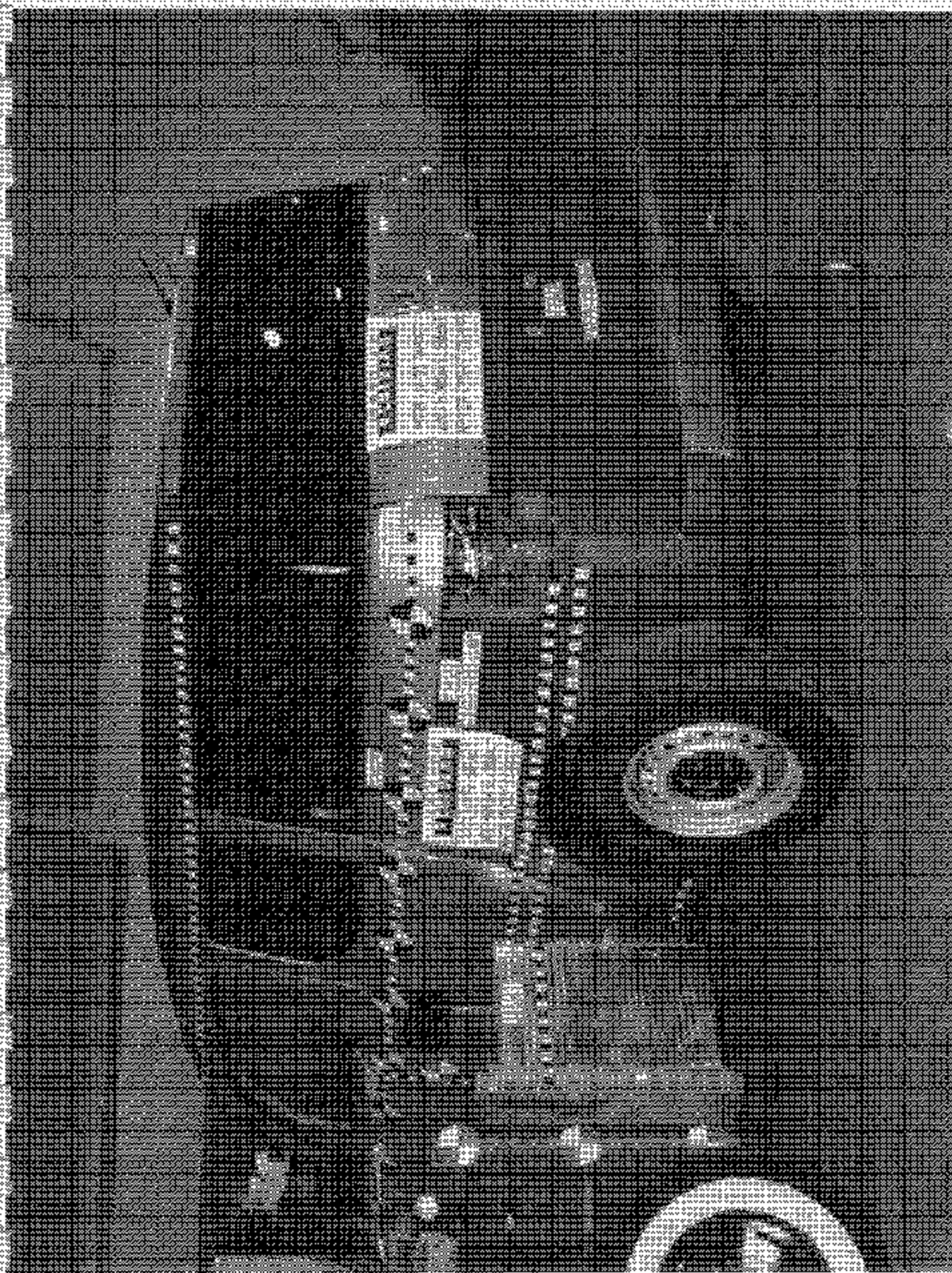


FIGURE 3-20. TEST RIGHT SIDE VIEW OF WIDE WHEEL WITH WIDE WHEEL IN POSITION

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Figure A-39 POST-TEST CLOSE-UP VIEW OF IMPACT POINT TARGET

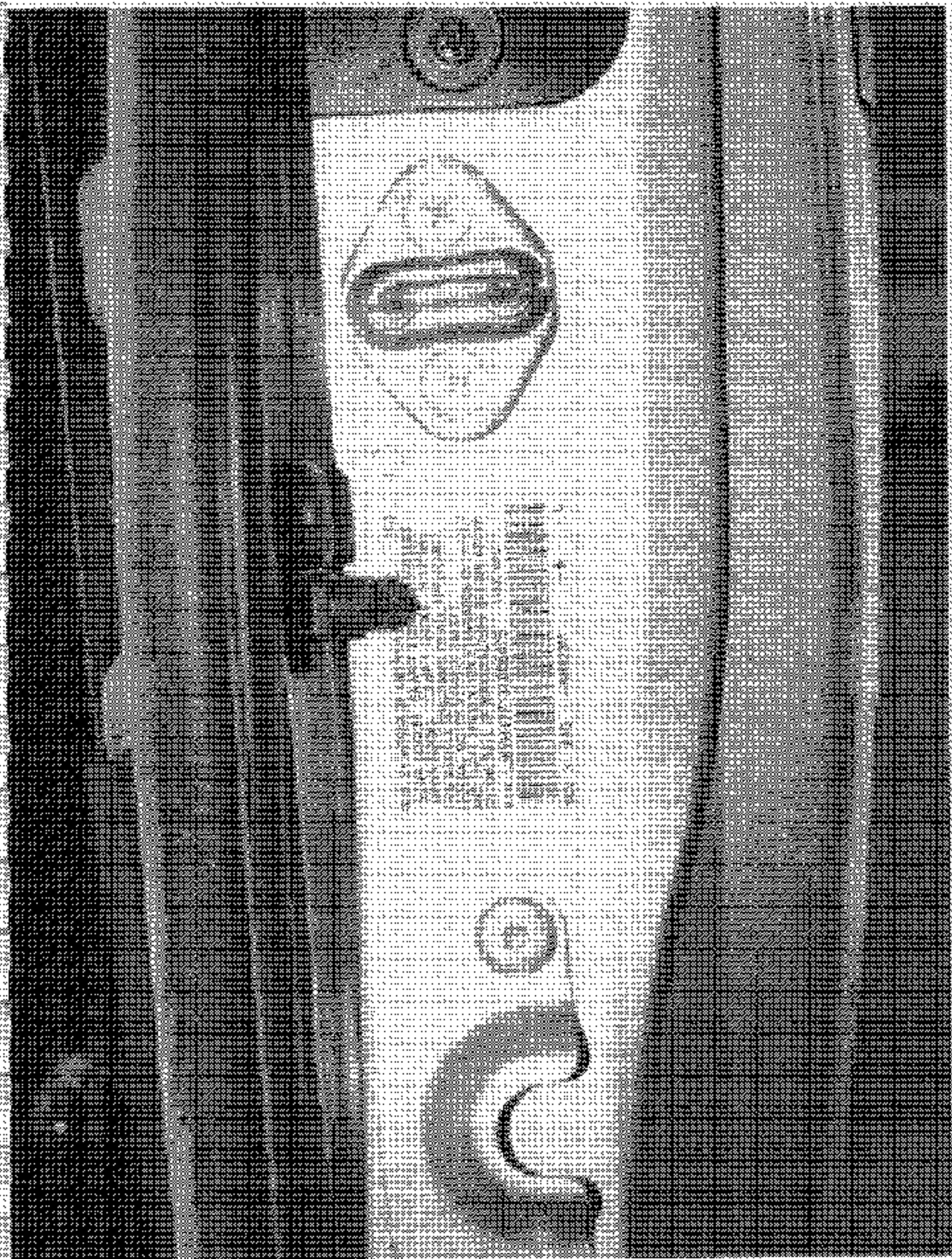


FIGURE A-10 CLOSE-UP VIEW OF VEHICLE SUBSCRIPTION LABEL

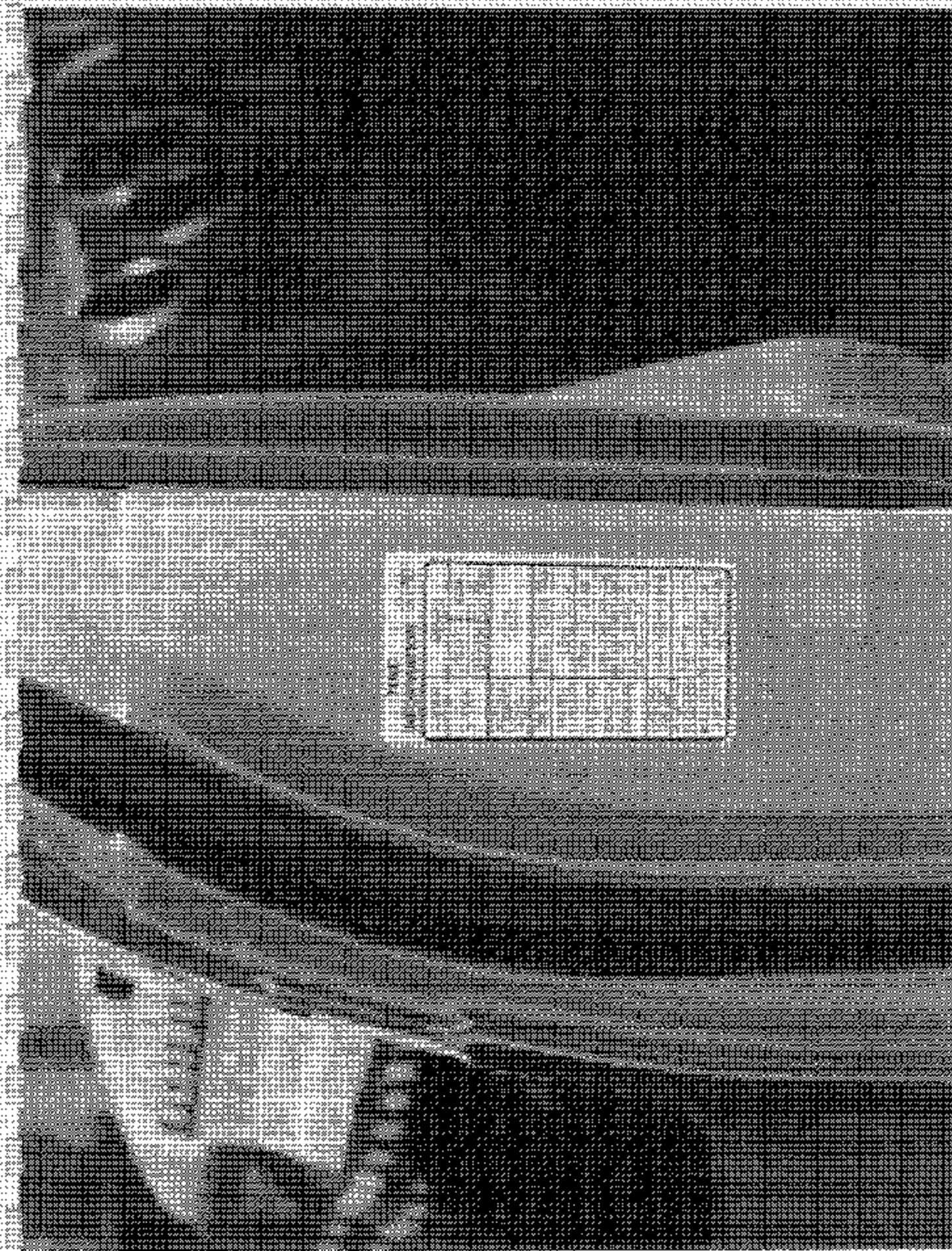


Figure A-4: CLOSE-UP VIEW OF VEHICLE SEAT PLACARD LABEL

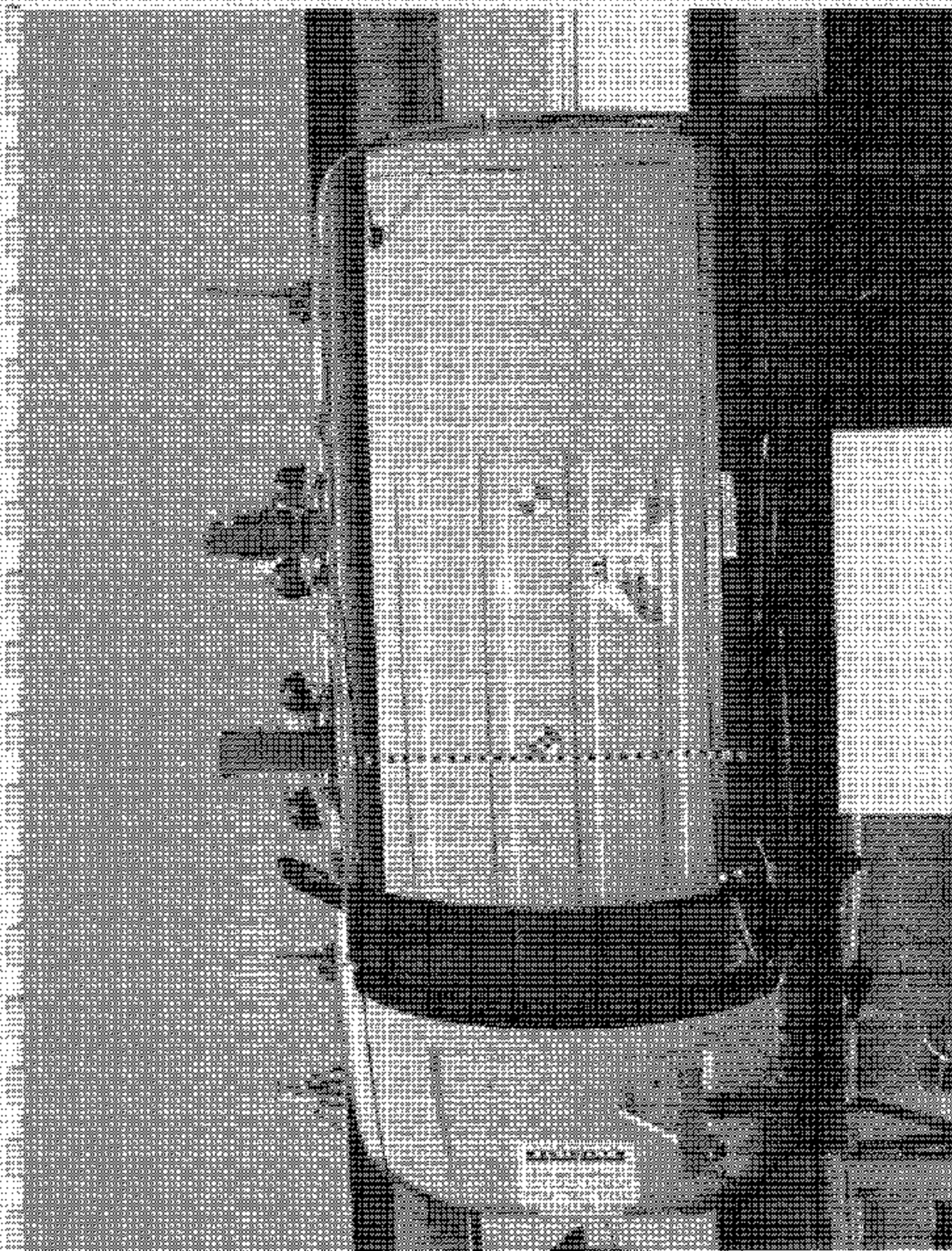
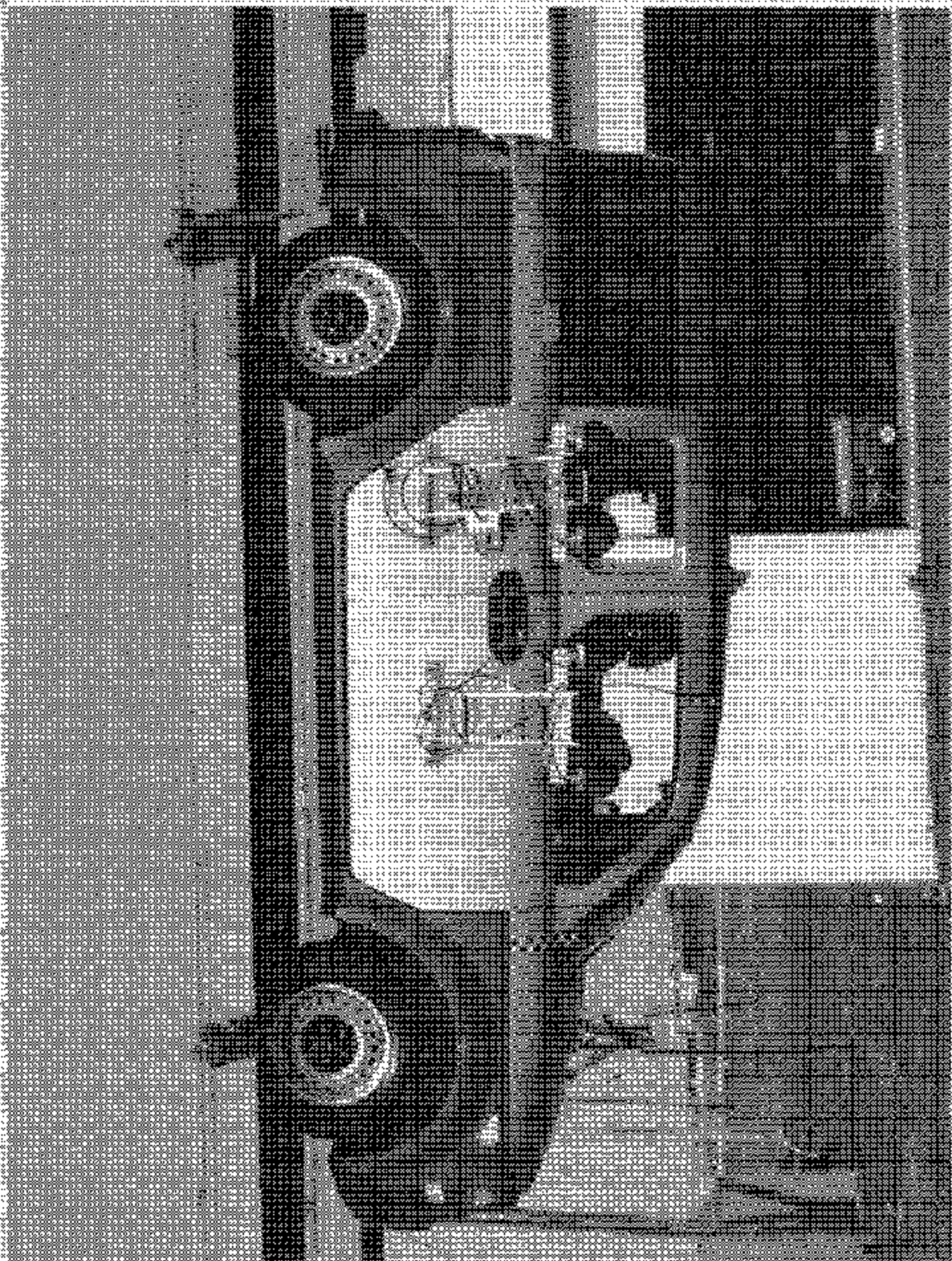


Figure A-4128B.1 (ONLINE) DUCURIES



Model A-48 rollover 180 degrees

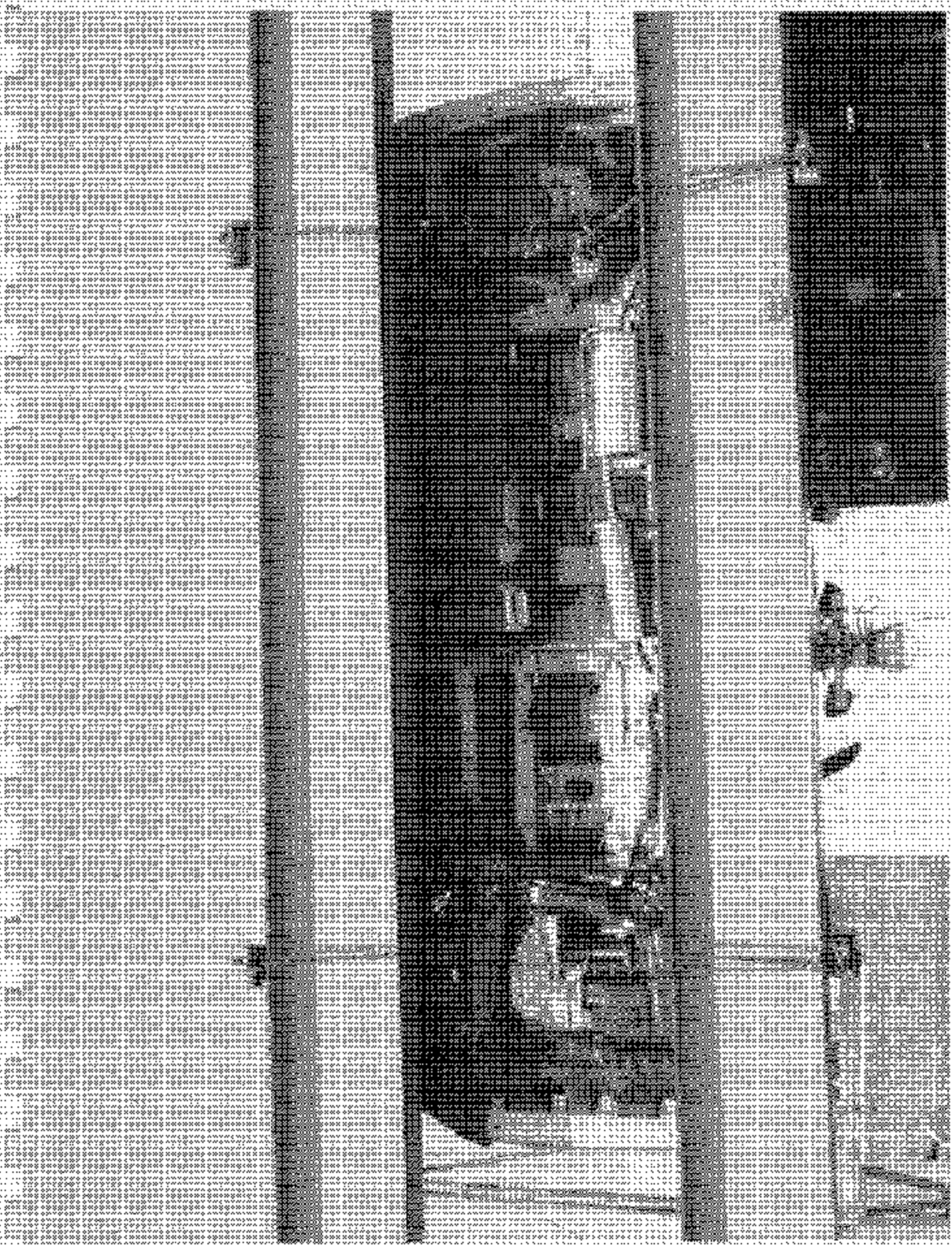


Figure A-45 FOHLIN 2501 PROFILES

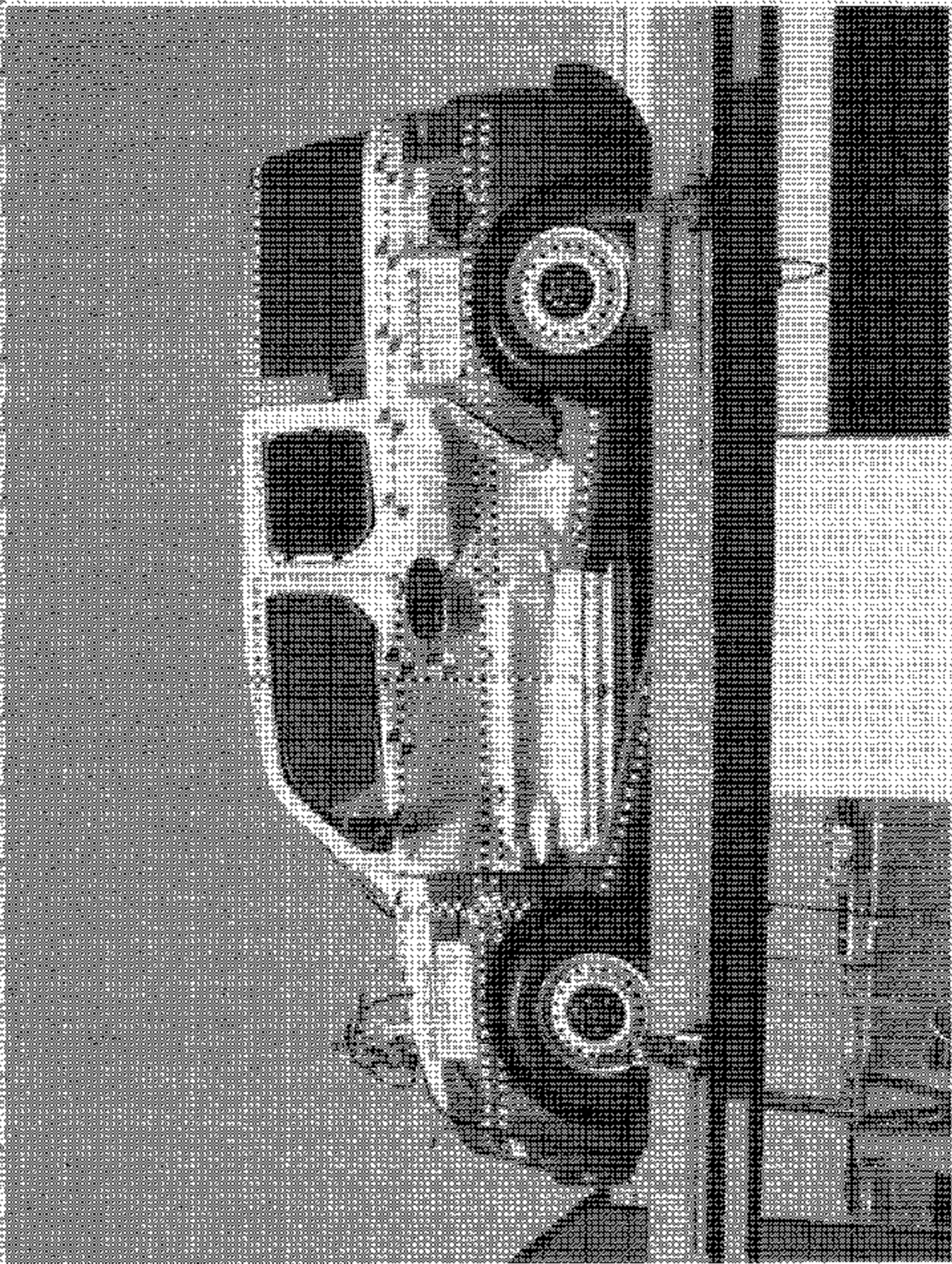


Figure A-6 FOLLOWER 301 WORTH

APPENDIX B

VEHICLE, MDB AND SID HYBRID III RESPONSE DATA

TABLE OF DATA PLOTS

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION, FORCE AND MOMENT DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180 INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
1	DRIVER HEAD 9 ARRAY X ARM (Y) ACCELERATION VS TIME	B- 7
2	DRIVER HEAD 9 ARRAY X ARM (Y) VELOCITY VS TIME	B- 8
3	DRIVER HEAD 9 ARRAY X ARM (Z) ACCELERATION VS TIME	B- 9
4	DRIVER HEAD 9 ARRAY X ARM (Z) VELOCITY VS TIME	B- 10
5	DRIVER HEAD 9 ARRAY Y ARM (X) ACCELERATION VS TIME	B- 11
6	DRIVER HEAD 9 ARRAY Y ARM (X) VELOCITY VS TIME	B- 12
7	DRIVER HEAD 9 ARRAY Y ARM (Z) ACCELERATION VS TIME	B- 13
8	DRIVER HEAD 9 ARRAY Y ARM (Z) VELOCITY VS TIME	B- 14
9	DRIVER HEAD 9 ARRAY Z ARM (X) ACCELERATION VS TIME	B- 15
10	DRIVER HEAD 9 ARRAY Z ARM (X) VELOCITY VS TIME	B- 16
11	DRIVER HEAD 9 ARRAY Z ARM (Y) ACCELERATION VS TIME	B- 17
12	DRIVER HEAD 9 ARRAY Z ARM (Y) VELOCITY VS TIME	B- 18
13	DRIVER HEAD (X) ACCELERATION VS TIME	B- 19
14	DRIVER HEAD (X) VELOCITY VS TIME	B- 20
15	DRIVER HEAD (Y) ACCELERATION VS TIME	B- 21
16	DRIVER HEAD (Y) VELOCITY VS TIME	B- 22
17	DRIVER HEAD (Z) ACCELERATION VS TIME	B- 23
18	DRIVER HEAD (Z) VELOCITY VS TIME	B- 24
19	DRIVER HEAD RESULTANT ACCELERATION VS TIME	B- 25
20	DRIVER UPPER NECK (X) FORCE VS TIME	B- 26
21	DRIVER UPPER NECK (Y) FORCE VS TIME	B- 27
22	DRIVER UPPER NECK (Z) FORCE VS TIME	B- 28
23	DRIVER UPPER NECK RESULTANT FORCE VS TIME	B- 29
24	DRIVER UPPER NECK (X) MOMENT VS TIME	B- 30
25	DRIVER UPPER NECK (Y) MOMENT VS TIME	B- 31
26	DRIVER UPPER NECK (Z) MOMENT VS TIME	B- 32
27	DRIVER UPPER NECK RESULTANT MOMENT VS TIME	B- 33
28	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 34
29	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 35
30	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 36
31	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 37
32	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 38
33	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 39
34	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 40
35	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 41

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION, FORCE AND MOMENT DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
36	PASSENGER HEAD 9 ARRAY X ARM (Y) ACCELERATION VS TIME	B- 42
37	PASSENGER HEAD 9 ARRAY X ARM (Y) VELOCITY VS TIME	B- 43
38	PASSENGER HEAD 9 ARRAY X ARM (Z) ACCELERATION VS TIME	B- 44
39	PASSENGER HEAD 9 ARRAY X ARM (Z) VELOCITY VS TIME	B- 45
40	PASSENGER HEAD 9 ARRAY Y ARM (X) ACCELERATION VS TIME	B- 46
41	PASSENGER HEAD 9 ARRAY Y ARM (X) VELOCITY VS TIME	B- 47
42	PASSENGER HEAD 9 ARRAY Y ARM (Z) ACCELERATION VS TIME	B- 48
43	PASSENGER HEAD 9 ARRAY Y ARM (Z) VELOCITY VS TIME	B- 49
44	PASSENGER HEAD 9 ARRAY Z ARM (X) ACCELERATION VS TIME	B- 50
45	PASSENGER HEAD 9 ARRAY Z ARM (X) VELOCITY VS TIME	B- 51
46	PASSENGER HEAD 9 ARRAY Z ARM (Y) ACCELERATION VS TIME	B- 52
47	PASSENGER HEAD 9 ARRAY Z ARM (Y) VELOCITY VS TIME	B- 53
48	PASSENGER HEAD (X) ACCELERATION VS TIME	B- 54
49	PASSENGER HEAD (X) VELOCITY VS TIME	B- 55
50	PASSENGER HEAD (Y) ACCELERATION VS TIME	B- 56
51	PASSENGER HEAD (Y) VELOCITY VS TIME	B- 57
52	PASSENGER HEAD (Z) ACCELERATION VS TIME	B- 58
53	PASSENGER HEAD (Z) VELOCITY VS TIME	B- 59
54	PASSENGER HEAD RESULTANT ACCELERATION VS TIME	B- 60
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58	DRIVER UPPER NECK RESULTANT FORCE VS TIME	B- 64
59	DRIVER UPPER NECK (X) MOMENT VS TIME	B- 65
60	DRIVER UPPER NECK (Y) MOMENT VS TIME	B- 66
61	DRIVER UPPER NECK (Z) MOMENT VS TIME	B- 67
62	DRIVER UPPER NECK RESULTANT MOMENT VS TIME	B- 68
63	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 69
64	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 70
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66	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 72
67	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 73
68	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 74
69	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 75
70	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 76

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS
ACCELERATION DATA - FIR FILTERED

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
71	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 77
72	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 78
73	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 79
74	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 80
75	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 81
76	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 82
77	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 83
78	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 84

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
79	RIGHT SIDE SILL AT FRONT SEAT (X) ACCELERATION VS TIME	B- 85
80	RIGHT SIDE SILL AT FRONT SEAT (X) VELOCITY VS TIME	B- 86
81	RIGHT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 87
82	RIGHT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 88
83	RIGHT SIDE SILL AT FRONT SEAT (Z) ACCELERATION VS TIME	B- 89
84	RIGHT SIDE SILL AT FRONT SEAT (Z) VELOCITY VS TIME	B- 90
85	RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION VS TIME	B- 91
86	RIGHT SIDE SILL AT REAR SEAT (X) ACCELERATION VS TIME	B- 92
87	RIGHT SIDE SILL AT REAR SEAT (X) VELOCITY VS TIME	B- 93
88	RIGHT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 94
89	RIGHT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 95
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92	RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION VS TIME	B- 98
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95	REAR FLOORPAN ABOVE AXLE (Y) ACCELERATION VS TIME	B- 101
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97	REAR FLOORPAN ABOVE AXLE (Z) ACCELERATION VS TIME	B- 103
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99	REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION VS TIME	B- 105
100	LEFT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 106
101	LEFT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 107
102	LEFT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 108
103	LEFT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 109
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106	LOWER B-POST (Y) ACCELERATION VS TIME	B- 112
107	LOWER B-POST (Y) VELOCITY VS TIME	B- 113
108	UPPER B-POST (Y) ACCELERATION VS TIME	B- 114
109	UPPER B-POST (Y) VELOCITY VS TIME	B- 115
110	LOWER A-POST (Y) ACCELERATION VS TIME	B- 116
111	LOWER A-POST (Y) VELOCITY VS TIME	B- 117
112	UPPER A-POST (Y) ACCELERATION VS TIME	B- 118
113	UPPER A-POST (Y) VELOCITY VS TIME	B- 119
114	FRONT SEAT TRACK (Y) ACCELERATION VS TIME	B- 120
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116	REAR SEAT TRACK (Y) ACCELERATION VS TIME	B- 122
117	REAR SEAT TRACK (Y) VELOCITY VS TIME	B- 123

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

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118	VEHICLE CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 124
119	VEHICLE CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 125
120	VEHICLE CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 126
121	VEHICLE CENTER OF GRAVITY (Y) VELOCITY ACCELERATION VS TIME	B- 127
122	VEHICLE CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 128
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MDB INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
125	MDB CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 131
126	MDB CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 132
127	MDB CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 133
128	MDB CENTER OF GRAVITY (Y) VELOCITY VS TIME	B- 134
129	MDB CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 135
130	MDB CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 136
131	MDB CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 137
132	MDB REAR (X) ACCELERATION VS TIME	B- 138
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DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
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137	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 143
138	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 144
139	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 145
140	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 146
141	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 147
142	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 148
143	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 149
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146	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 152
147	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 153
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149	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 155
150	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 156
151	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 157

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FIR FILTERED

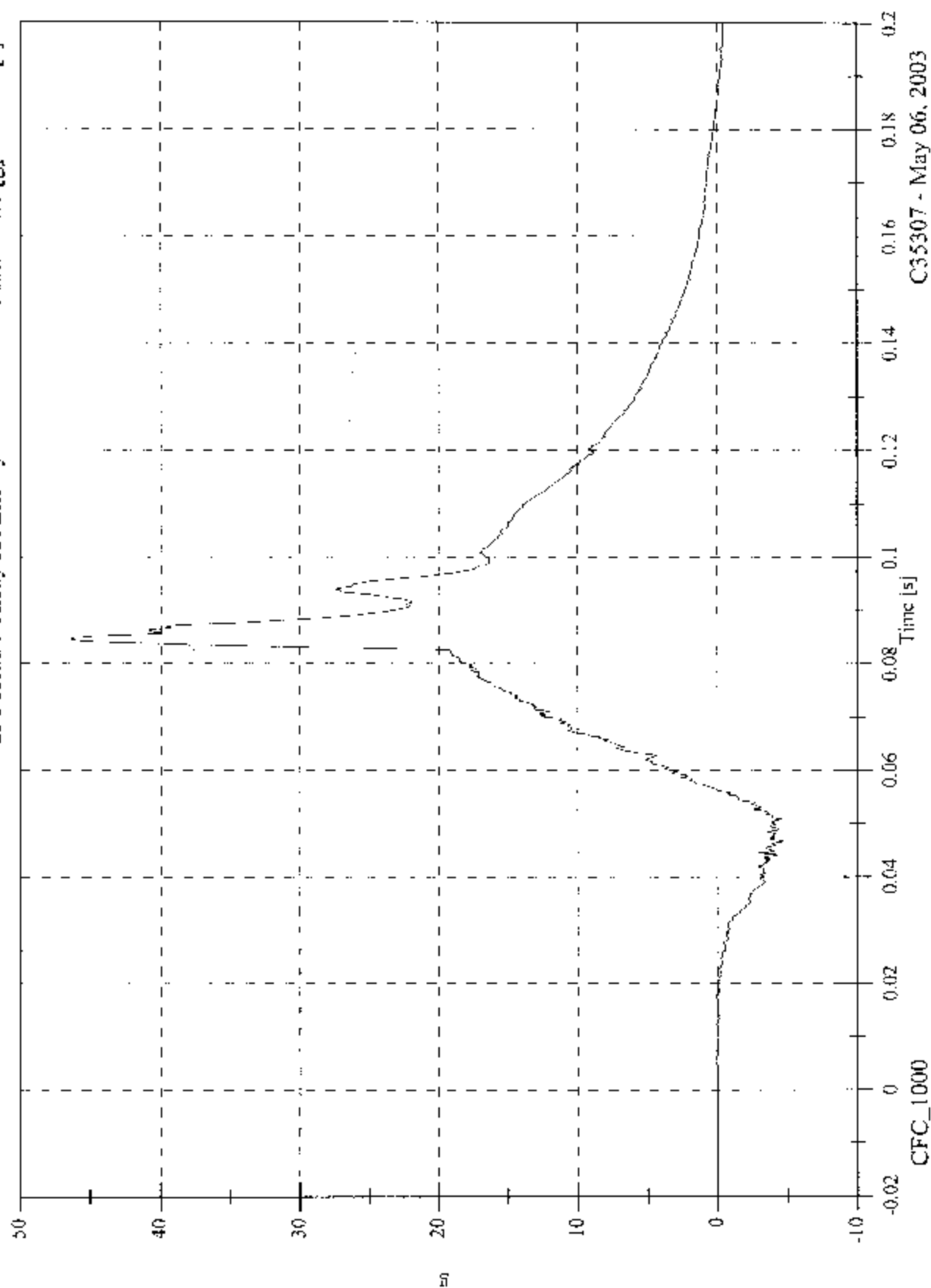
<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
152	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 158
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154	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 160
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156	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 162
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158	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 164
159	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 165

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Ay

Max: 46.4 [g] at 0.085 [s]

Min: -4.8 [g] at 0.047 [s]

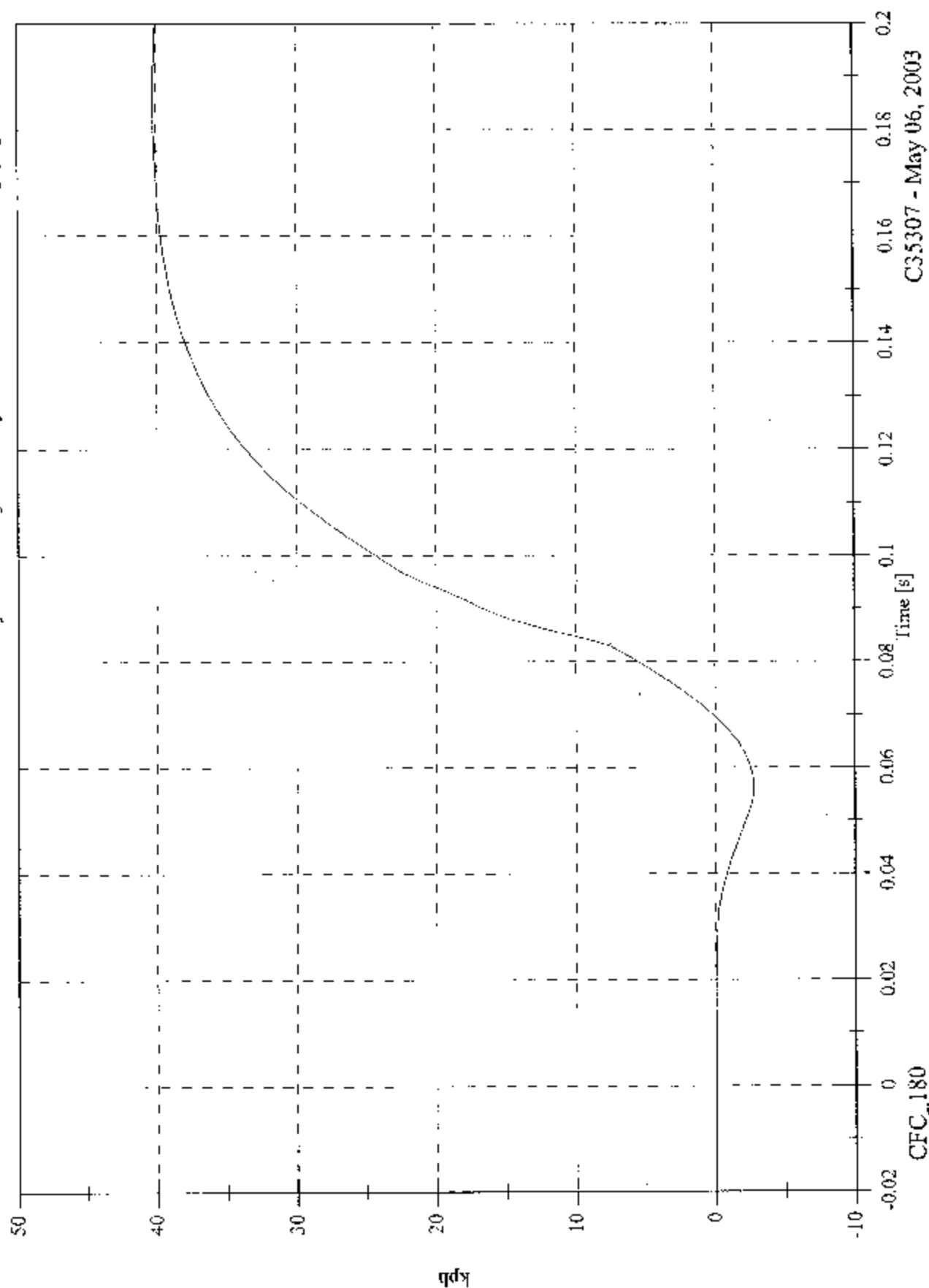


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Ay Velocity

Max: 40.2 [kph] at 0.184 [s]
Min: -2.7 [kph] at 0.056 [s]

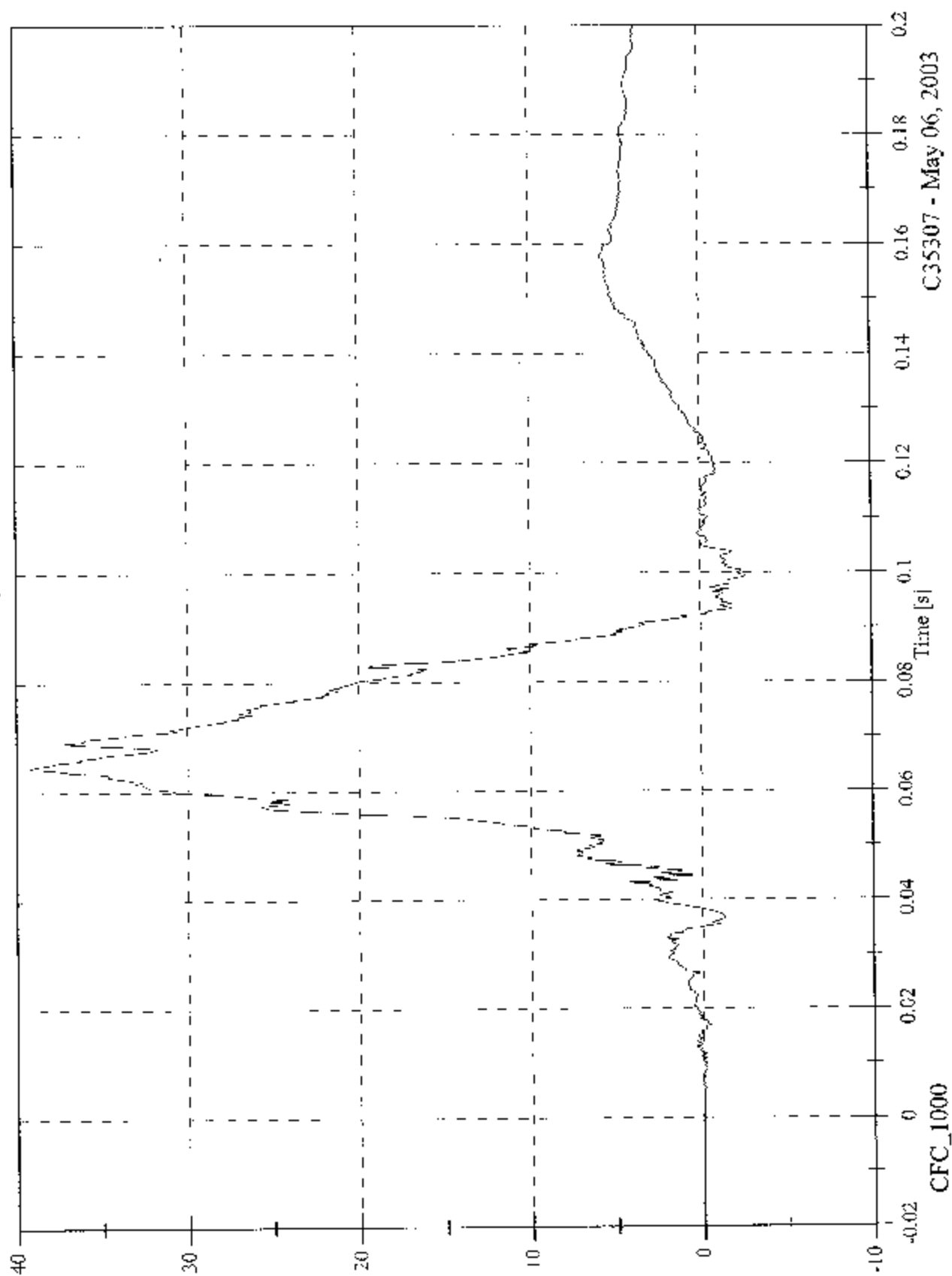


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Az

Max: 39.2 [g] at 0.064 [s]
Min: -2.6 [g] at 0.099 [s]

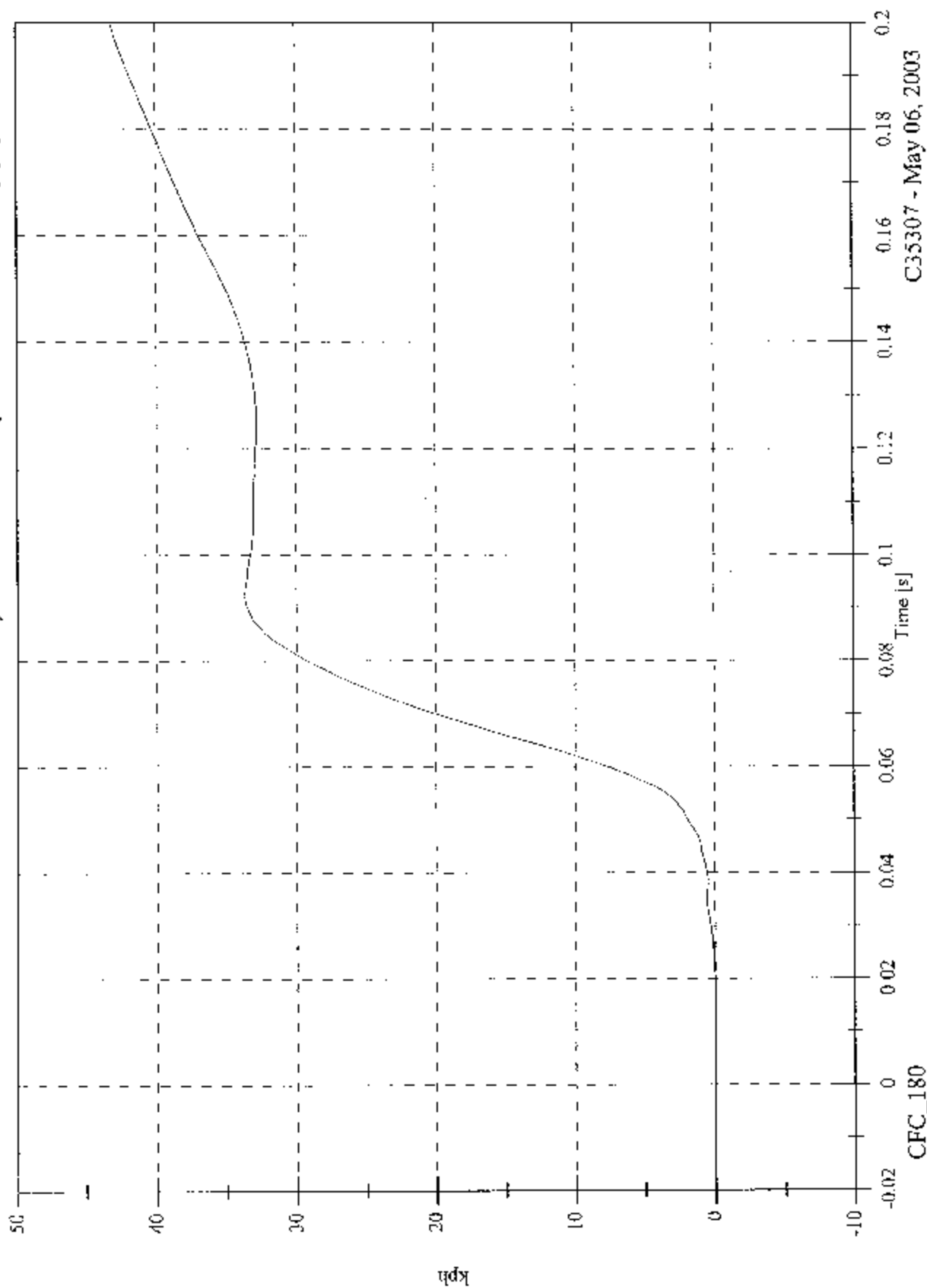


2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array X Arm Az Velocity

Max: 43.2 [kph] at 0.200 [s]

Min: -0.0 [kph] at 0.012 [s]



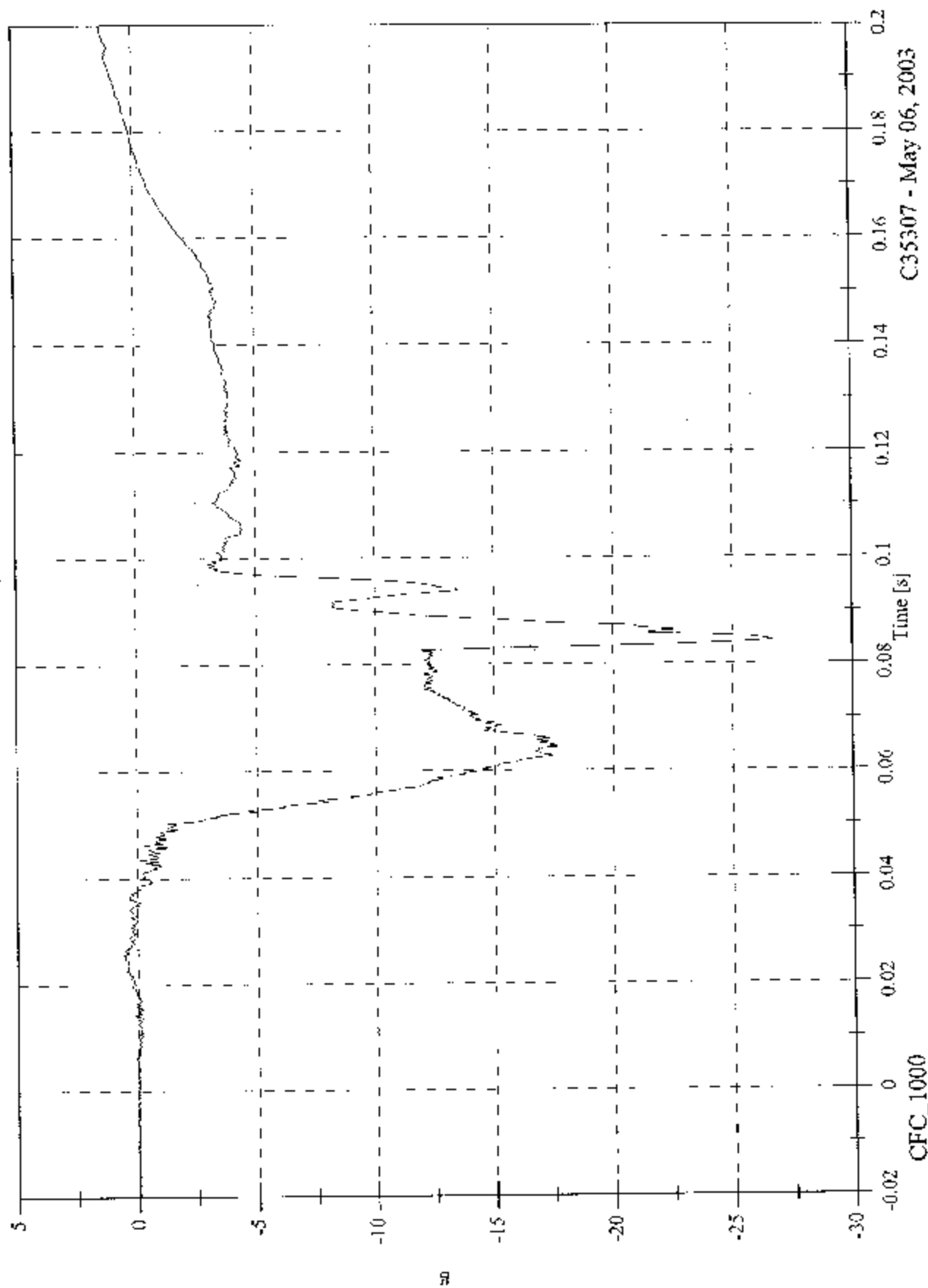
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Y Arm Ax

Max: 1.3 [g] at 0.200 [s]

Min: -26.7 [g] at 0.084 [s]

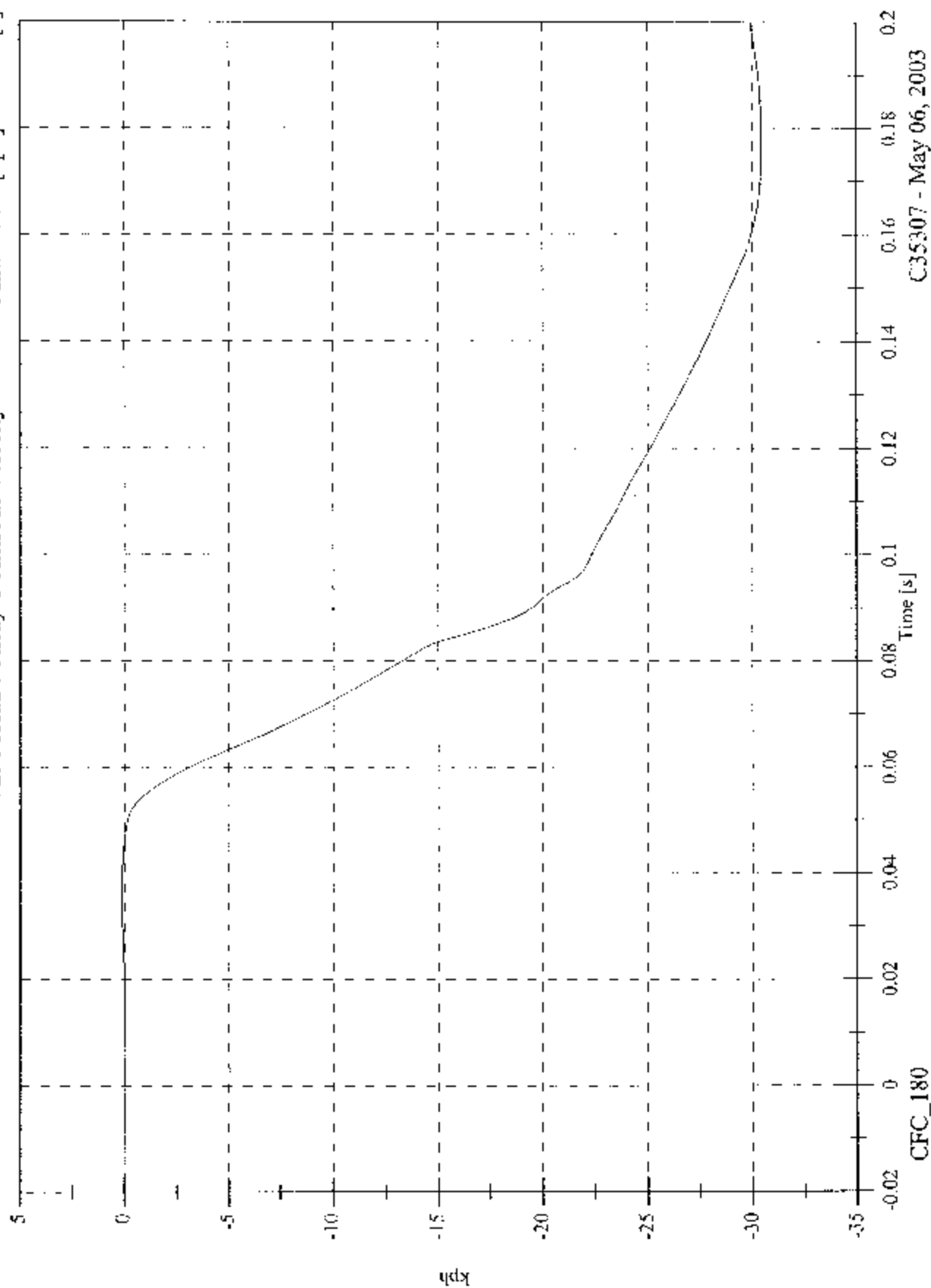


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Y Arm Ax Velocity

Max: 0.1 [kph] at 0.038 [s]
Min: -30.5 [kph] at 0.177 [s]

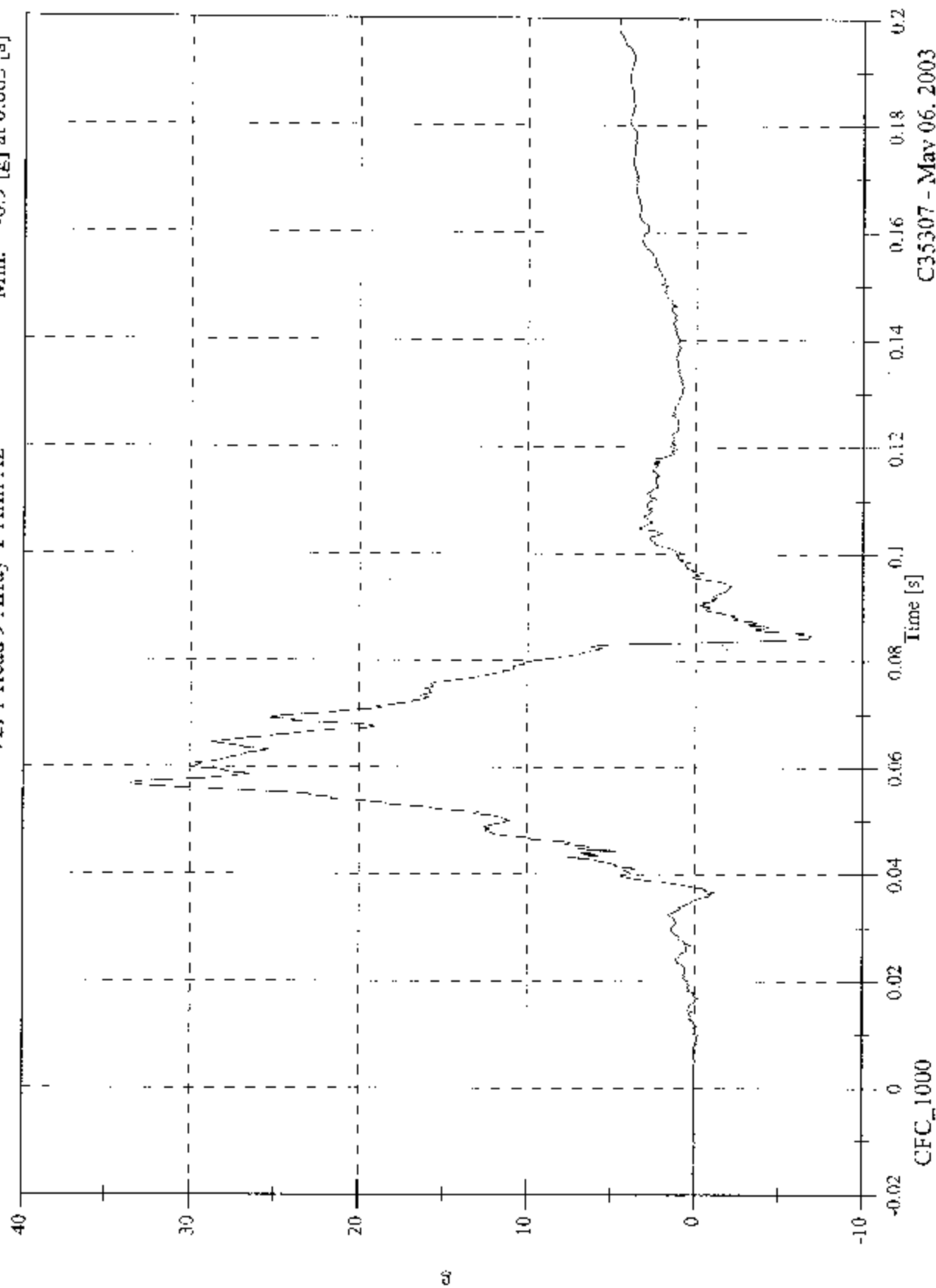


CFC_180

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Max: 33.6 [g] at 0.057 [s]
Min: -6.9 [g] at 0.085 [s]

V2P1 Head 9 Array Y Arm Az

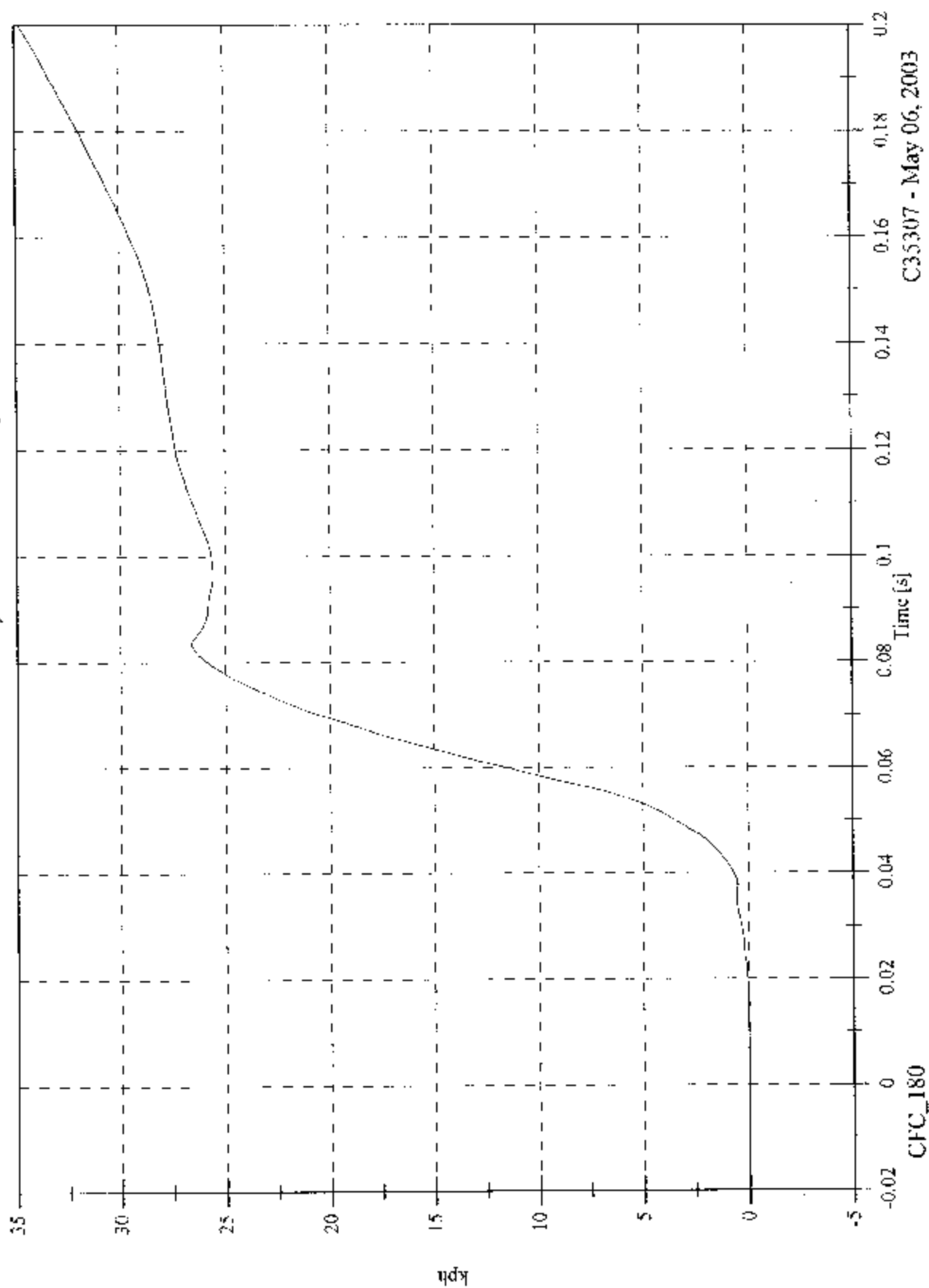


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 34.8 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.018 [s]

V2P1 Head 9 Array Y Arm Az Velocity

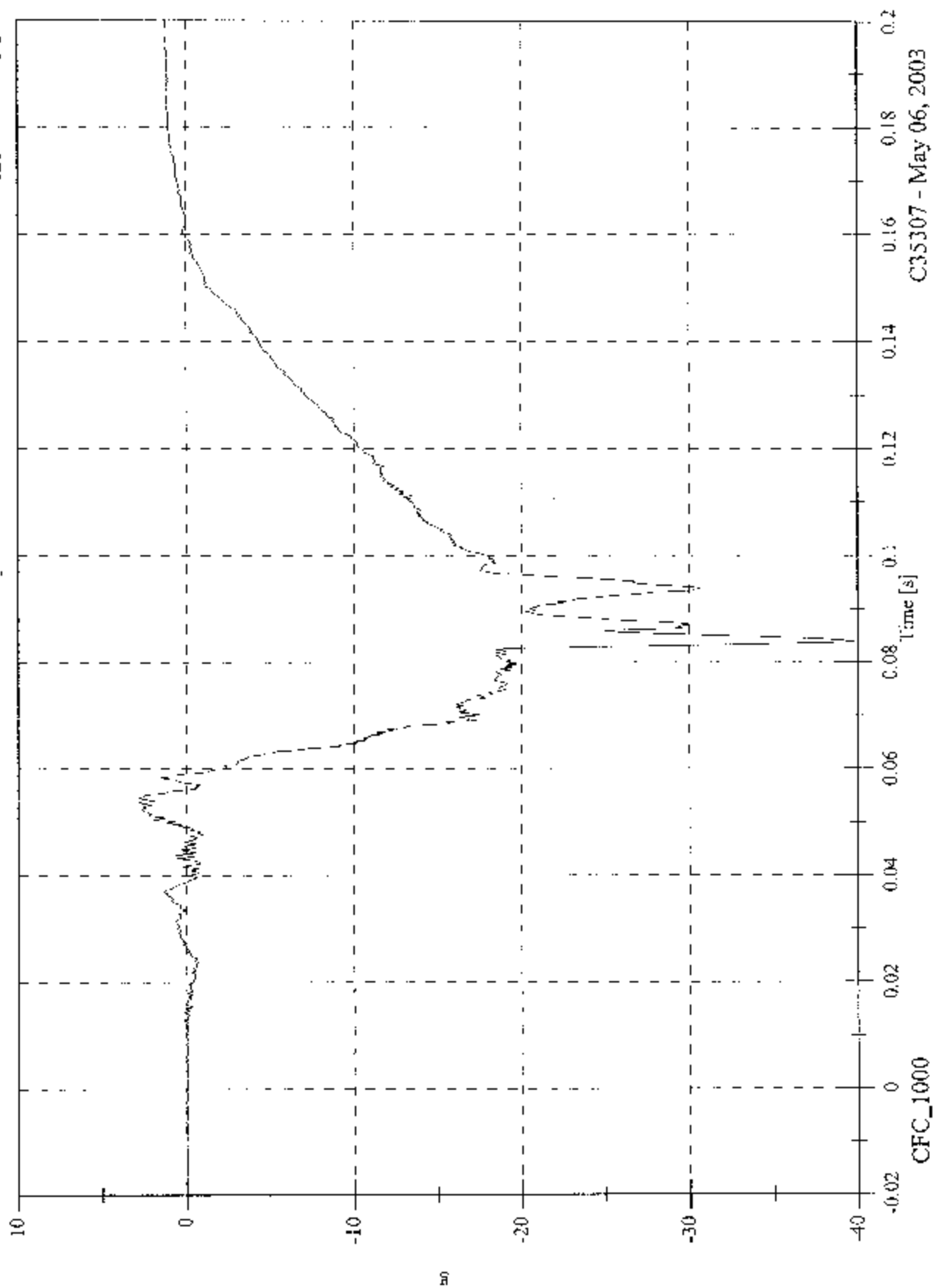


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Z Arm Ax

Max: 2.8 [g] at 0.055 [s]
Min: -39.8 [g] at 0.084 [s]

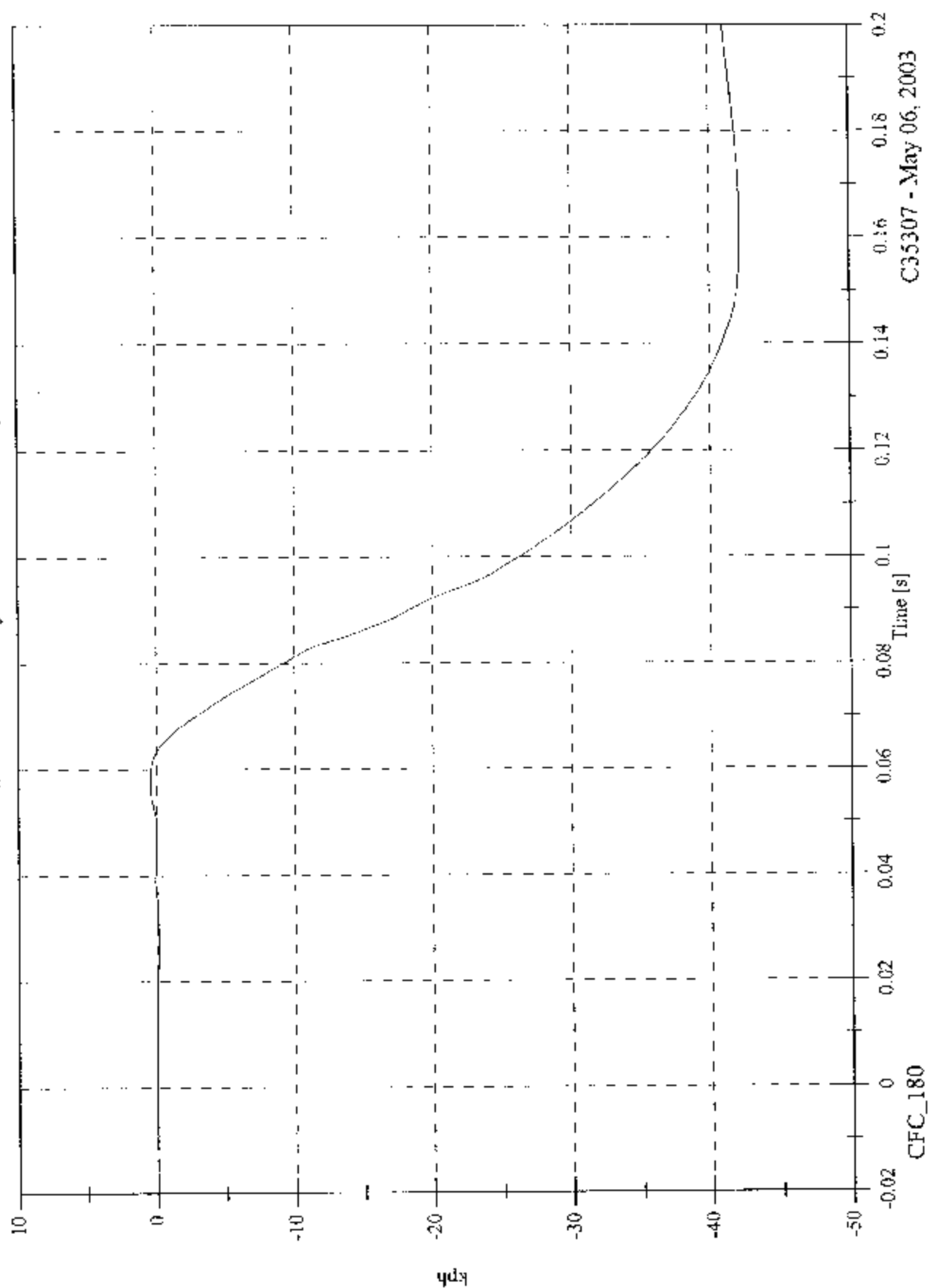


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.5 [kph] at 0.059 [s]
Min: -42.2 [kph] at 0.159 [s]

V2P1 Head 9 Array Z Arm Ax Velocity



CFC_180

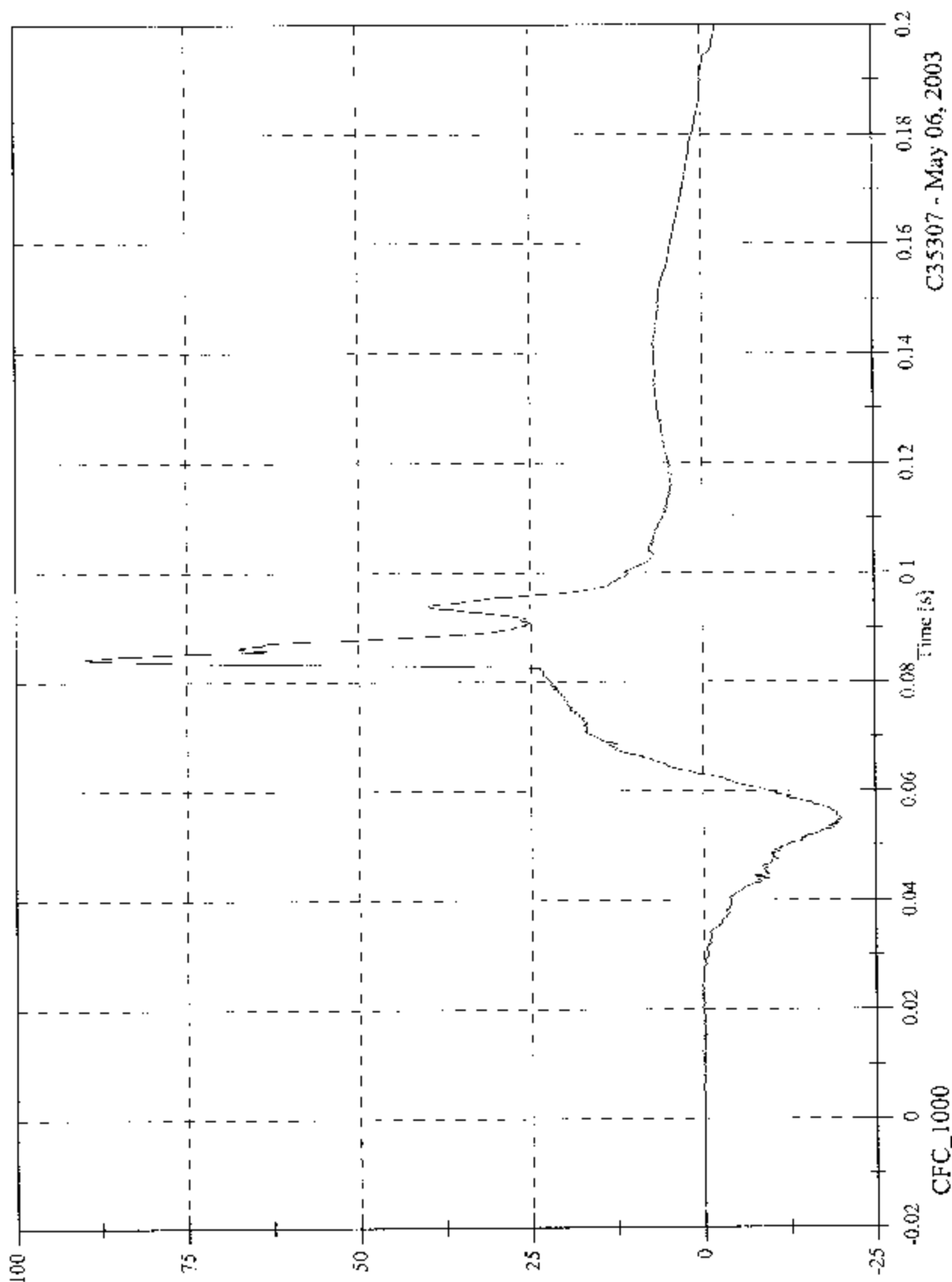
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2PI Head 9 Array Z Aim Ay

Max: 90.0 [g] at 0.084 [s]

Min: -20.0 [g] at 0.055 [s]

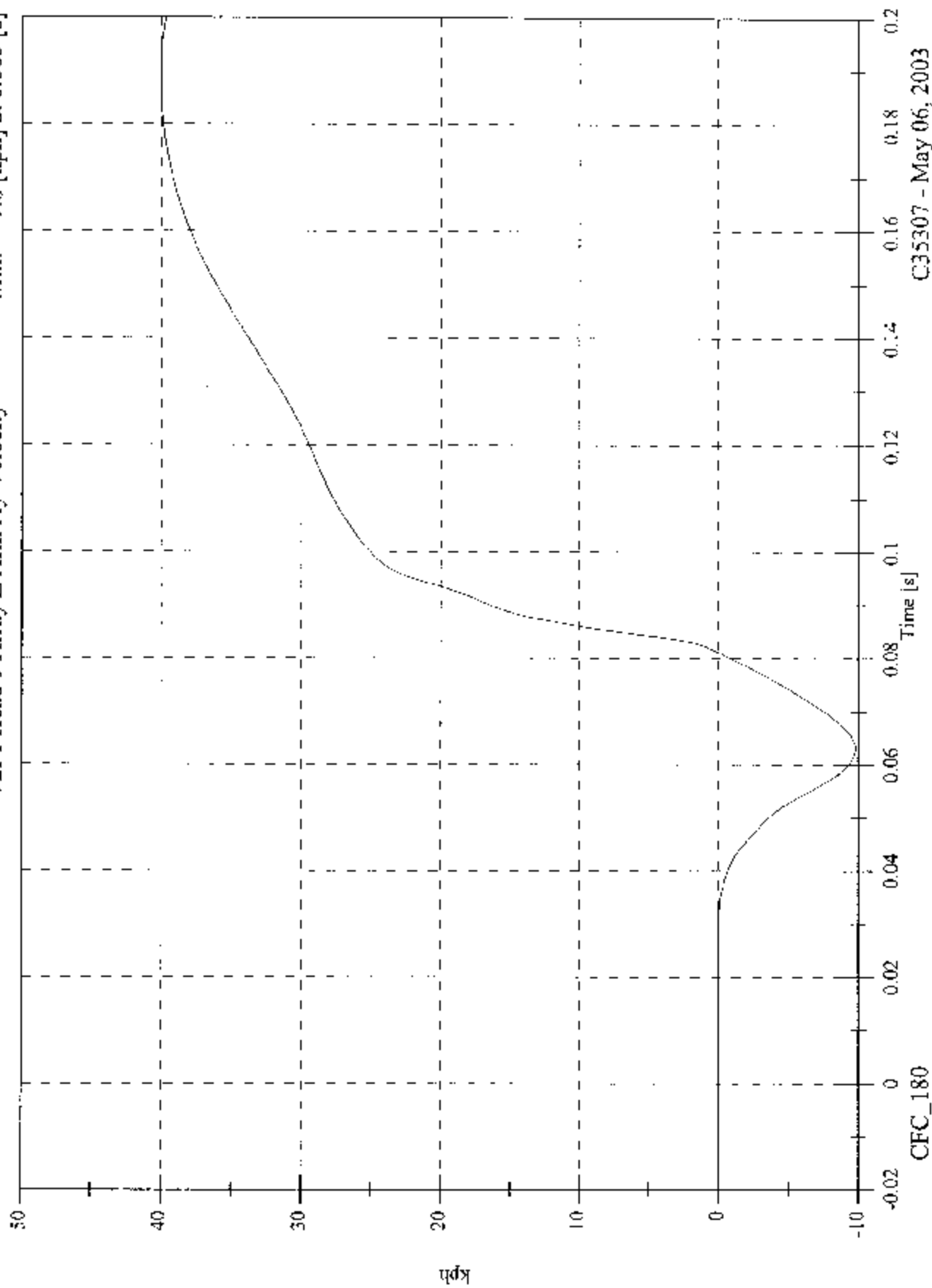


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Head 9 Array Z Arm Ay Velocity

Max: 40.0 [kph] at 0.190 [s]
Min: -9.8 [kph] at 0.063 [s]

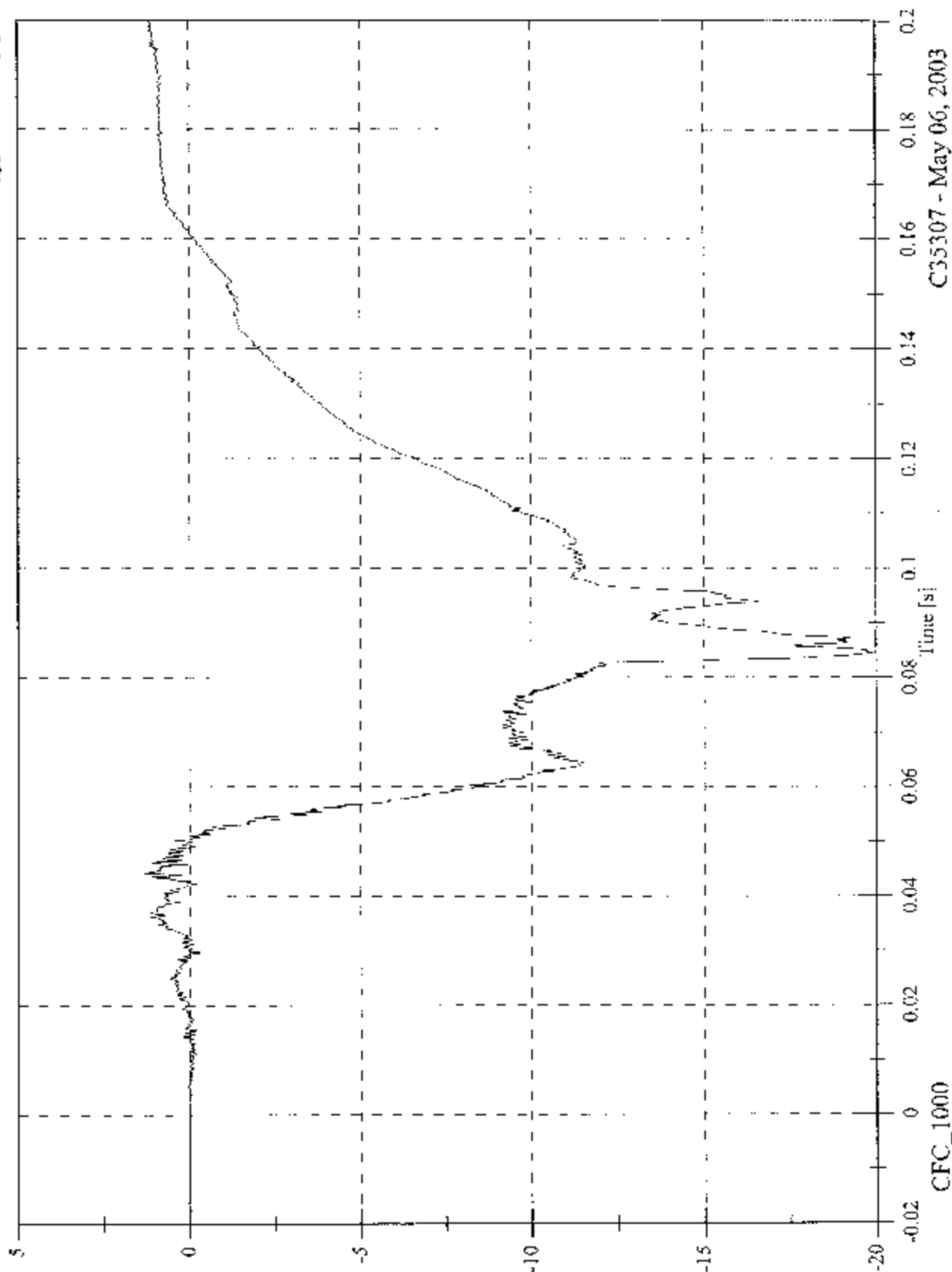


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Max: 1.3 [g] at 0.044 [s]
Min: -19.9 [g] at 0.084 [s]

V2PI Head x

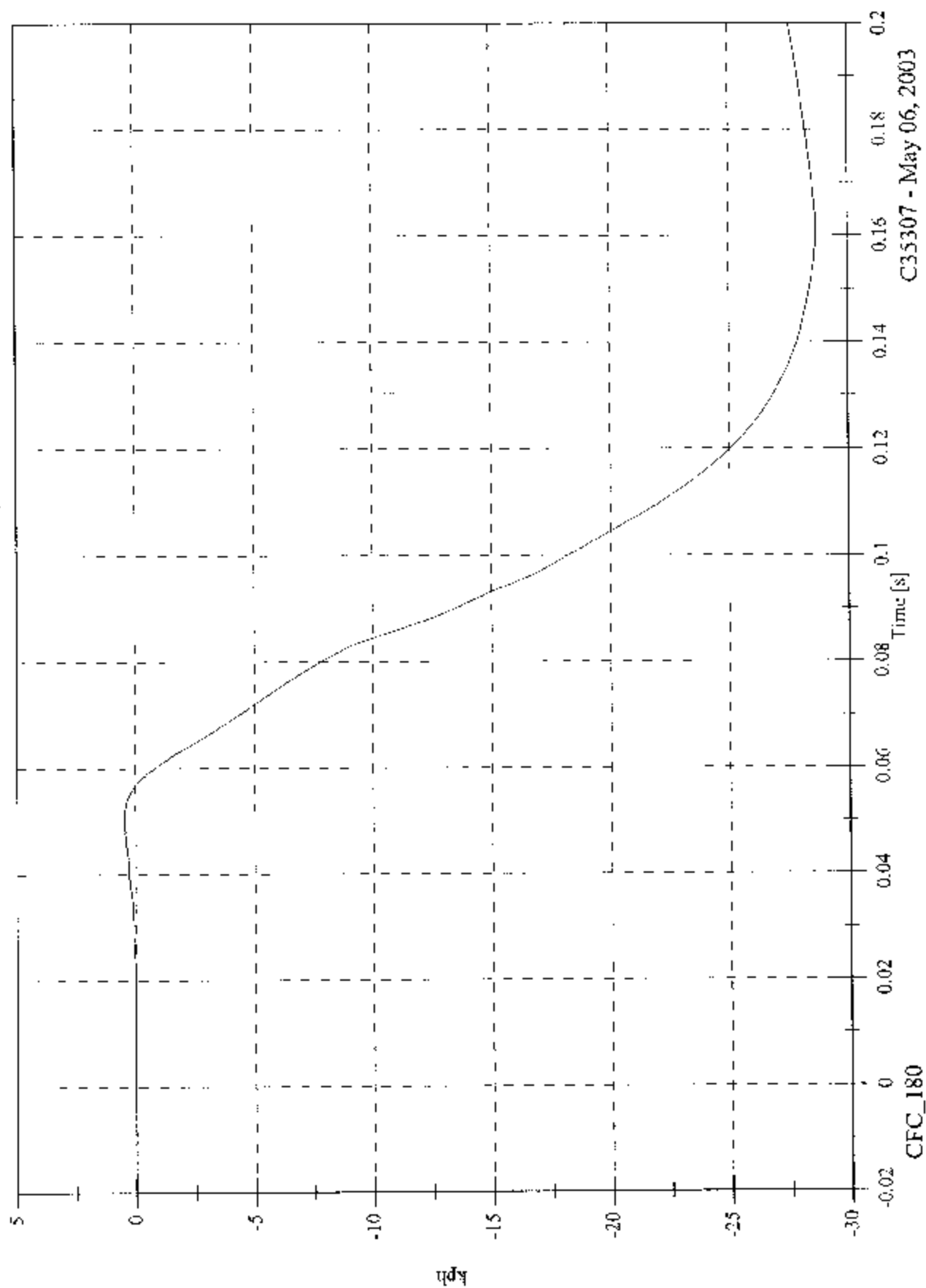


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.4 [kph] at 0.050 [s]
 Min: -28.7 [kph] at 0.161 [s]

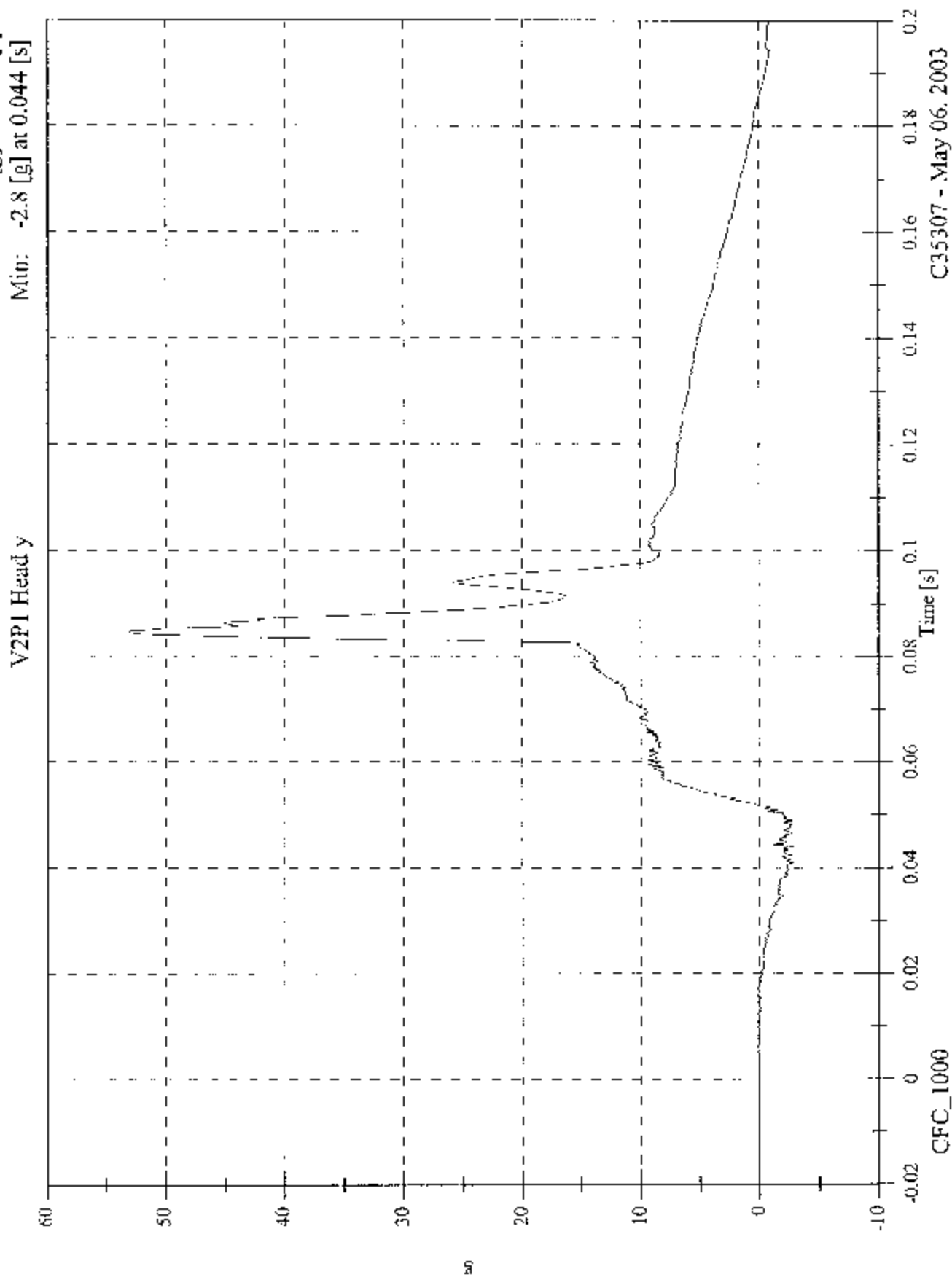
V2P1 Head x Velocity



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2003 FNVSS 214D Test 8 2003 Honda Element

Max: 53.1 [g] at 0.085 [s]
Min: -2.8 [g] at 0.044 [s]

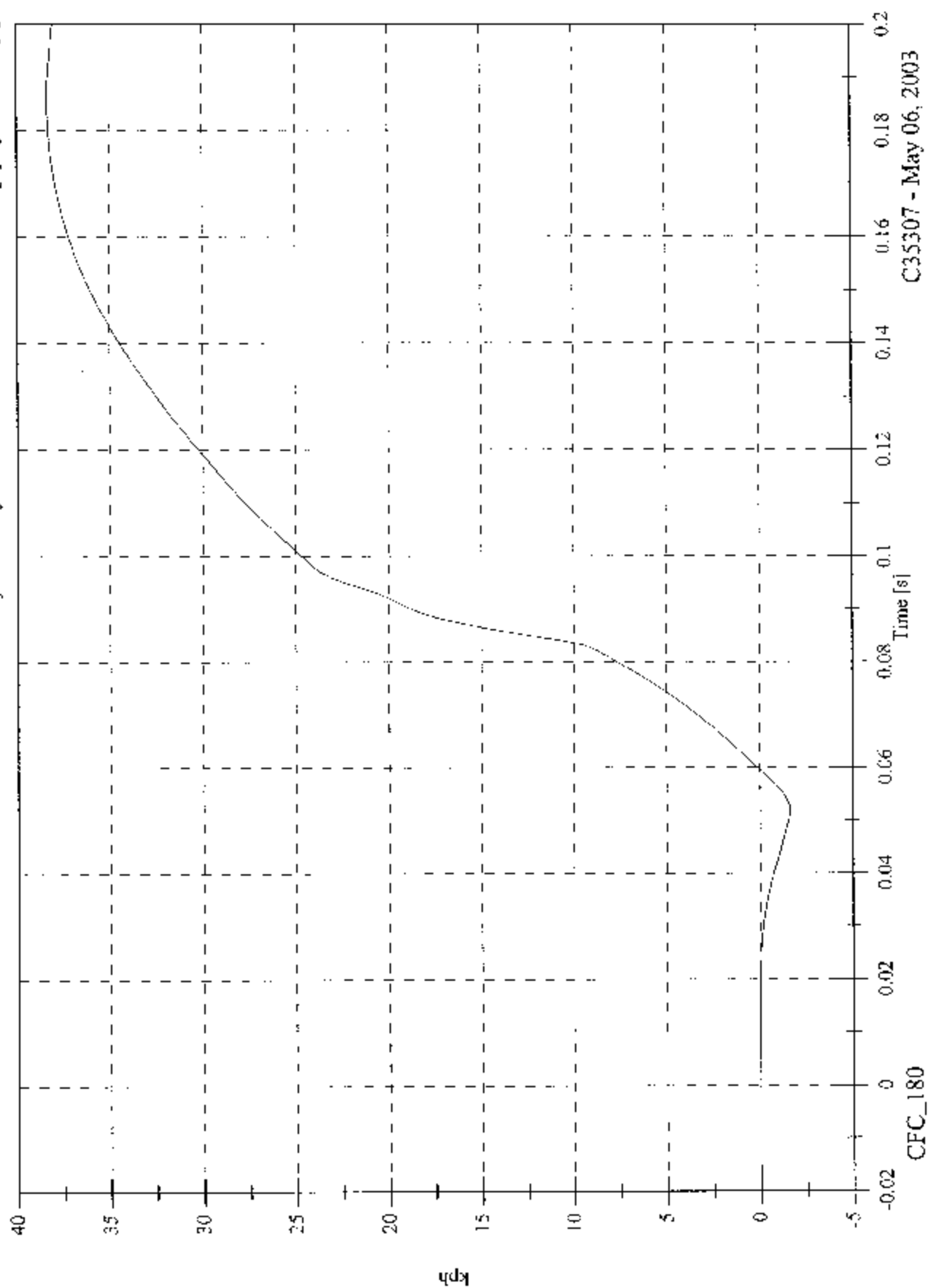


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 38.4 [kph] at 0.185 [s]
 Min: -1.6 [kph] at 0.052 [s]

V2P1 Head y Velocity

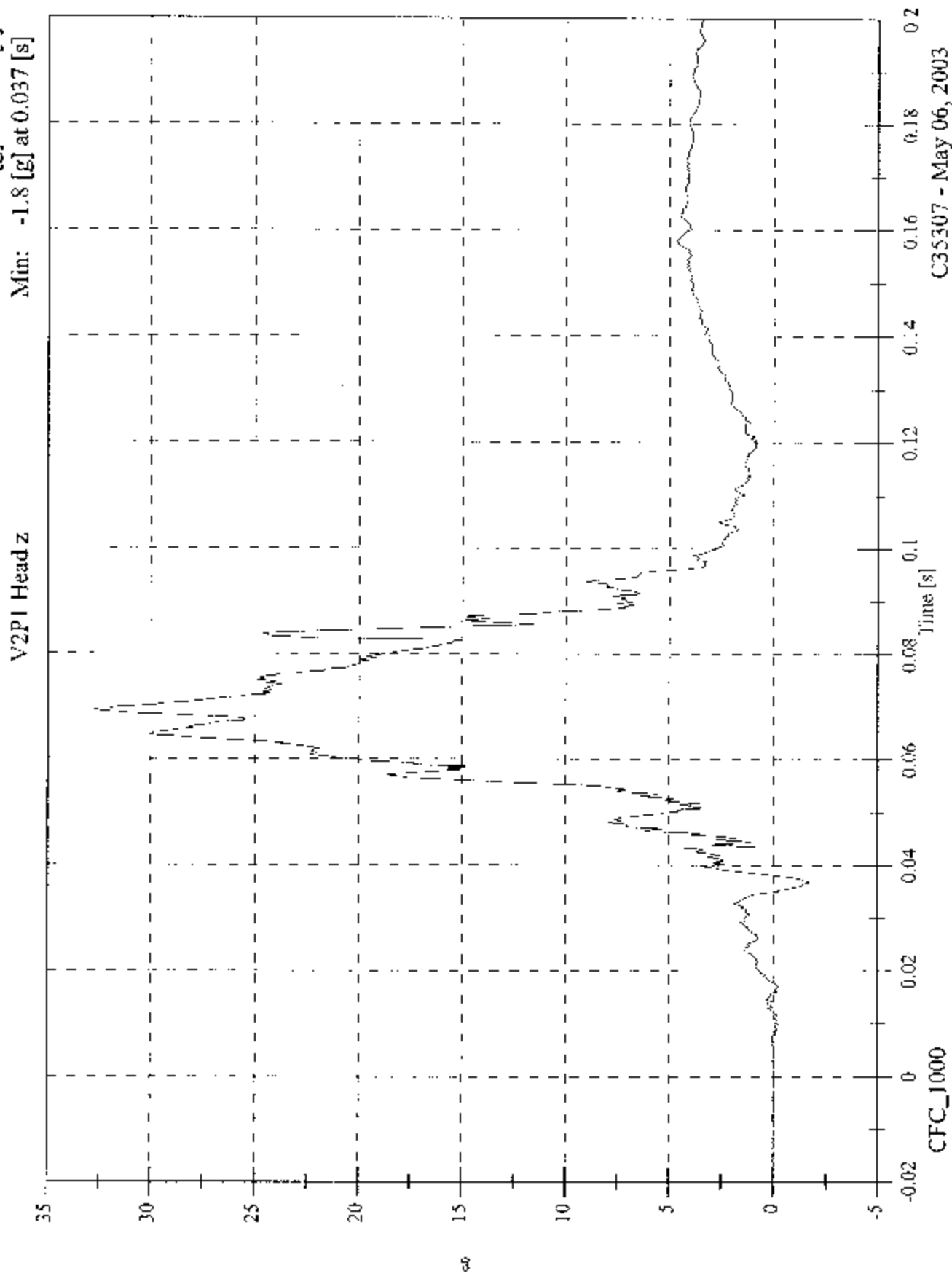


CFC_180

C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 32.8 [g] at 0.069 [s]
Min: -1.8 [g] at 0.037 [s]

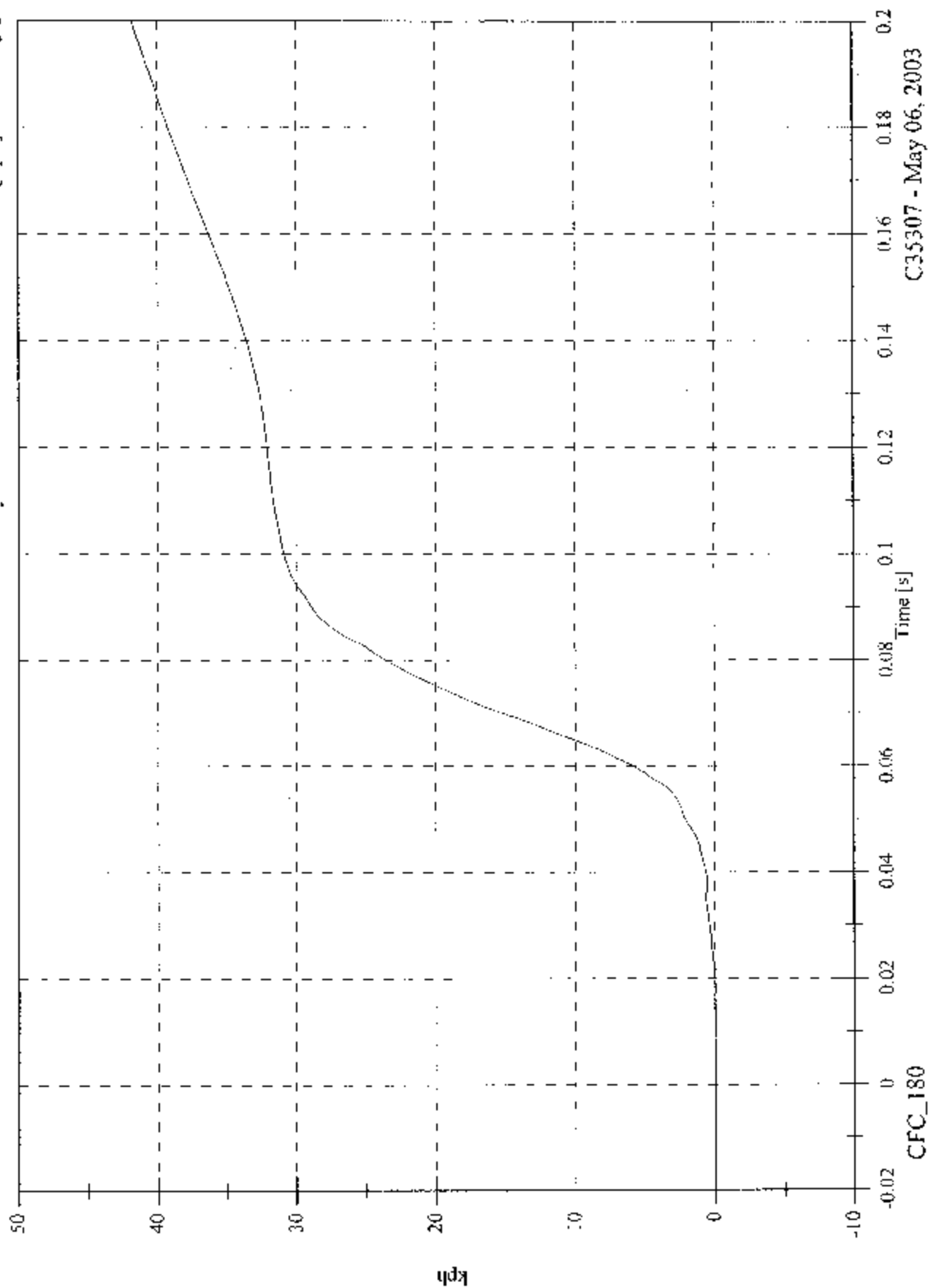


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 41.8 [kph] at 0.200 [s]
 Min: -0.0 [kph] at 0.012 [s]

V2P1 Head z Velocity



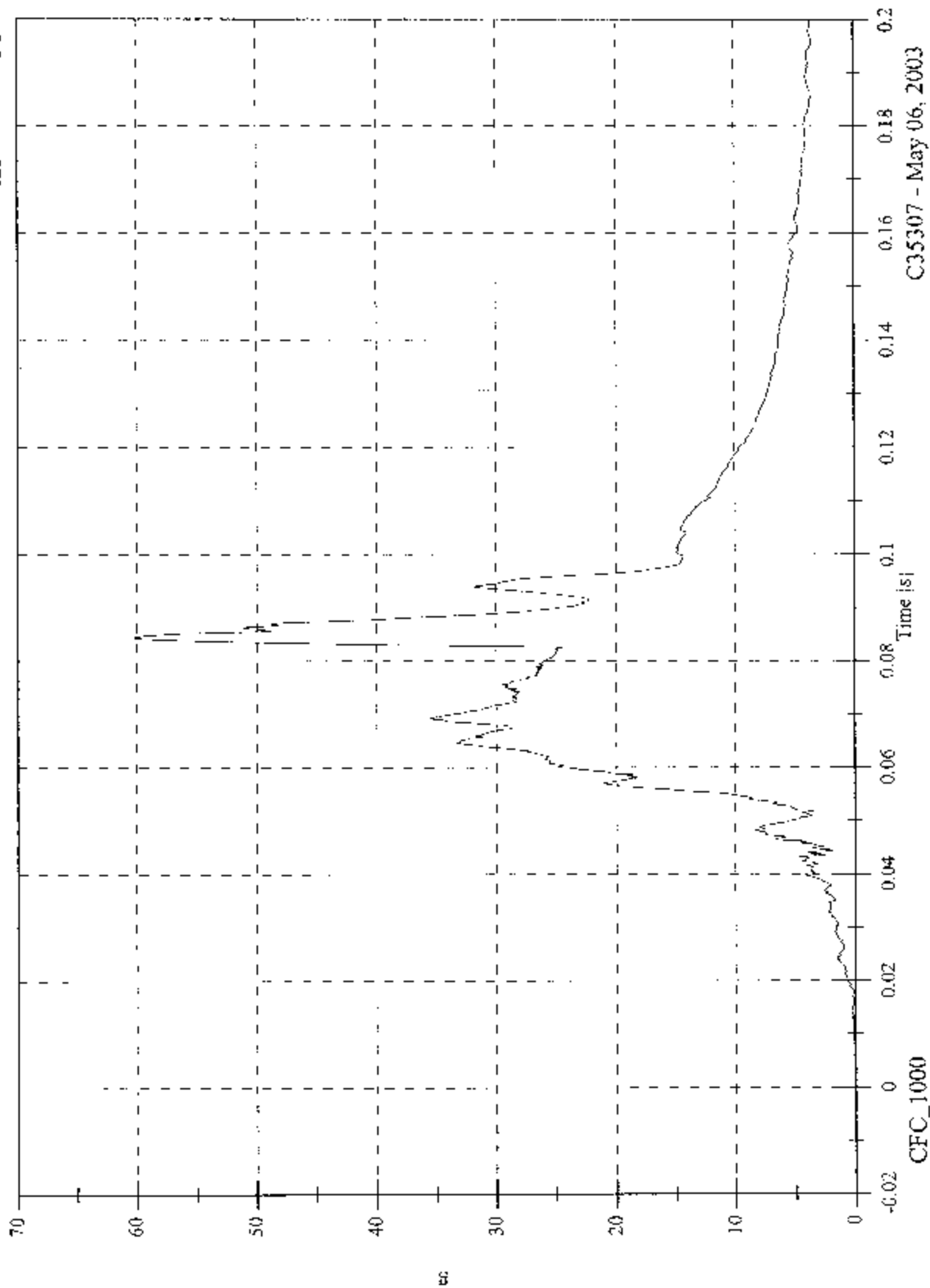
CFC_180

C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 60.3 [g] at 0.084 [s]
Min: 0.0 [g] at -0.015 [s]

V2P1 Head Resultant



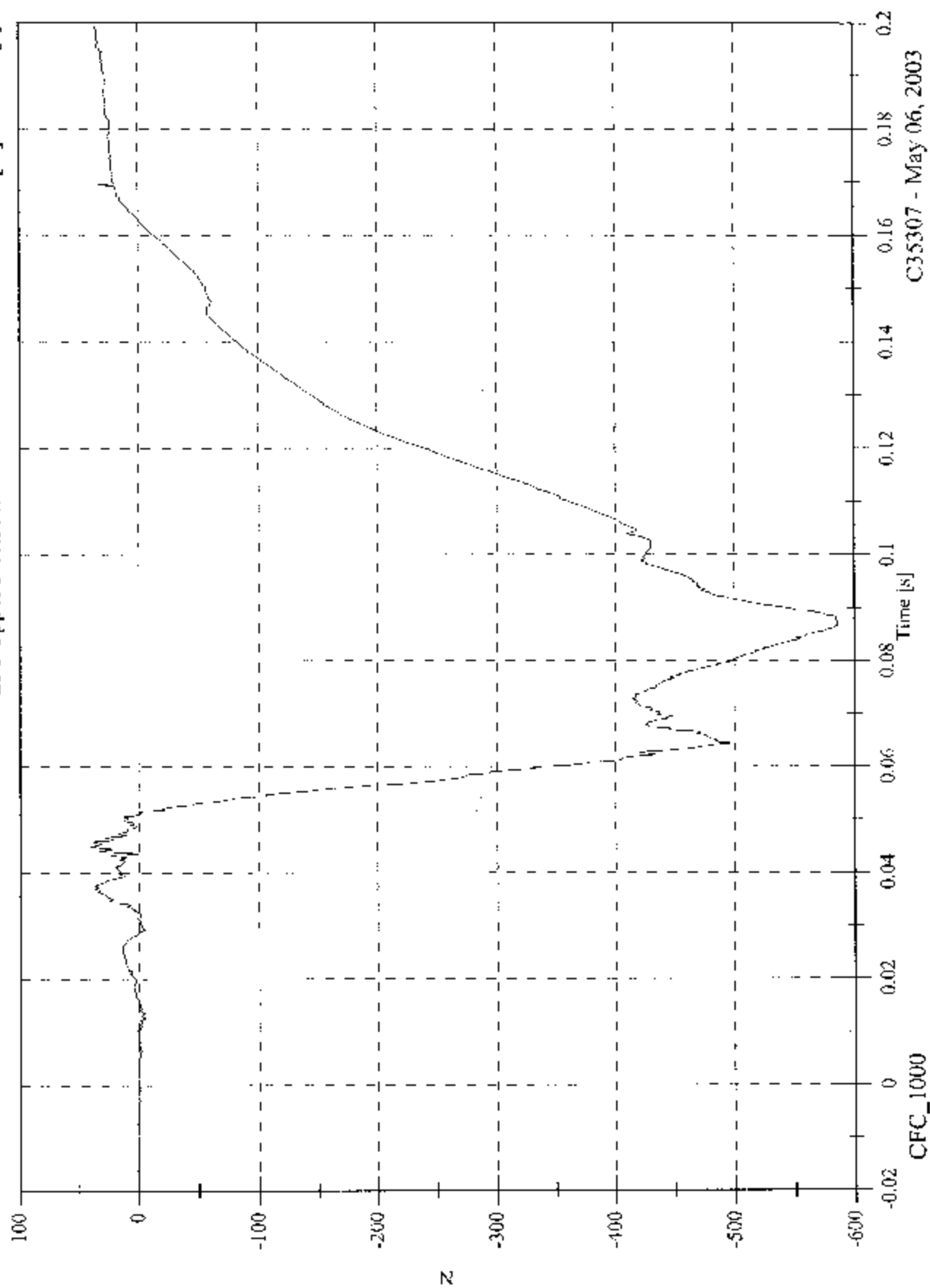
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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 40.3 [N] at 0.045 [s]

Min: -585.6 [N] at 0.087 [s]

V2P1 Upper Neck Fx

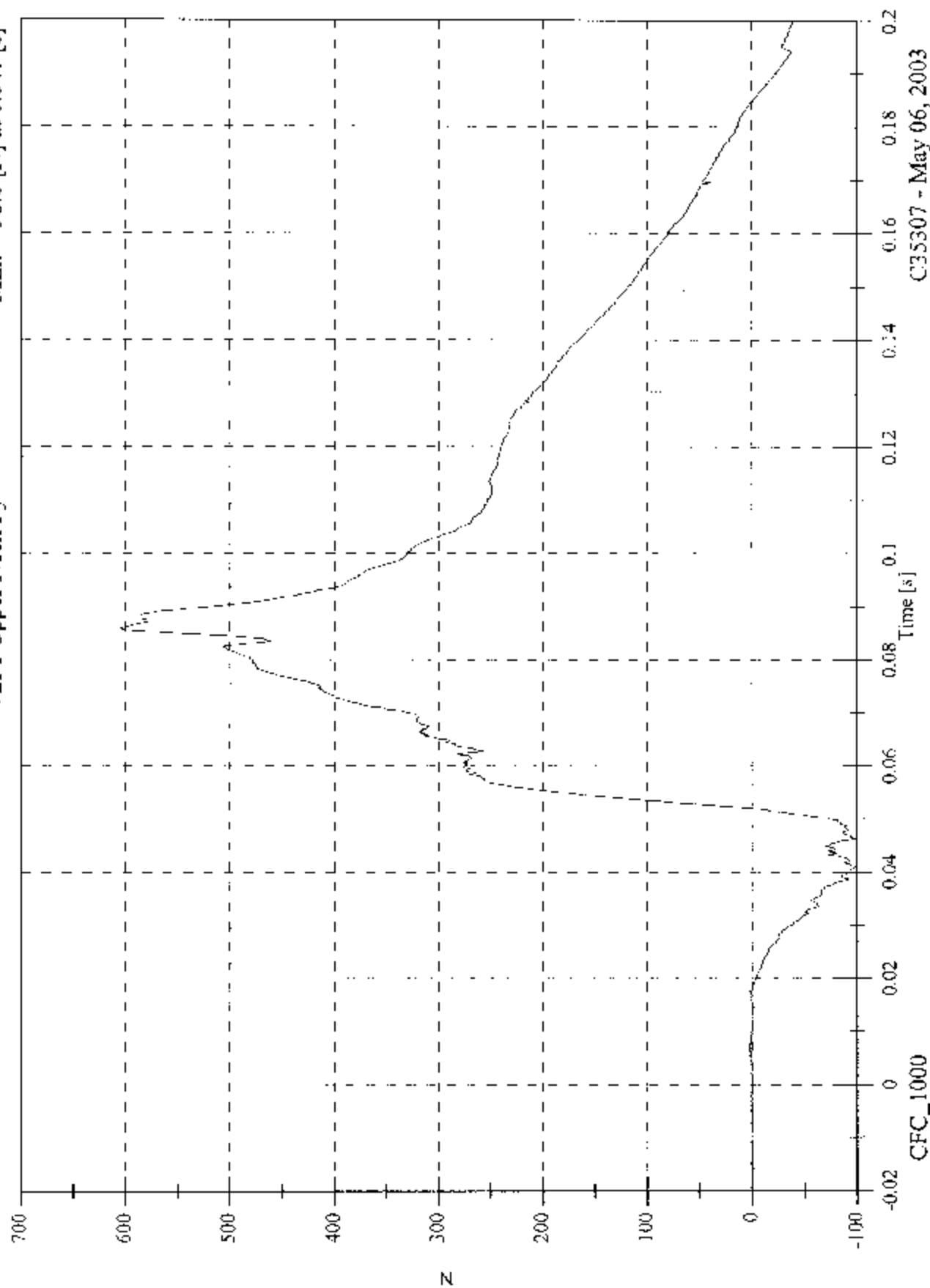


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 605.4 [N] at 0.086 [s]
Min: -98.6 [N] at 0.041 [s]

V2P1 Upper Neck Fy

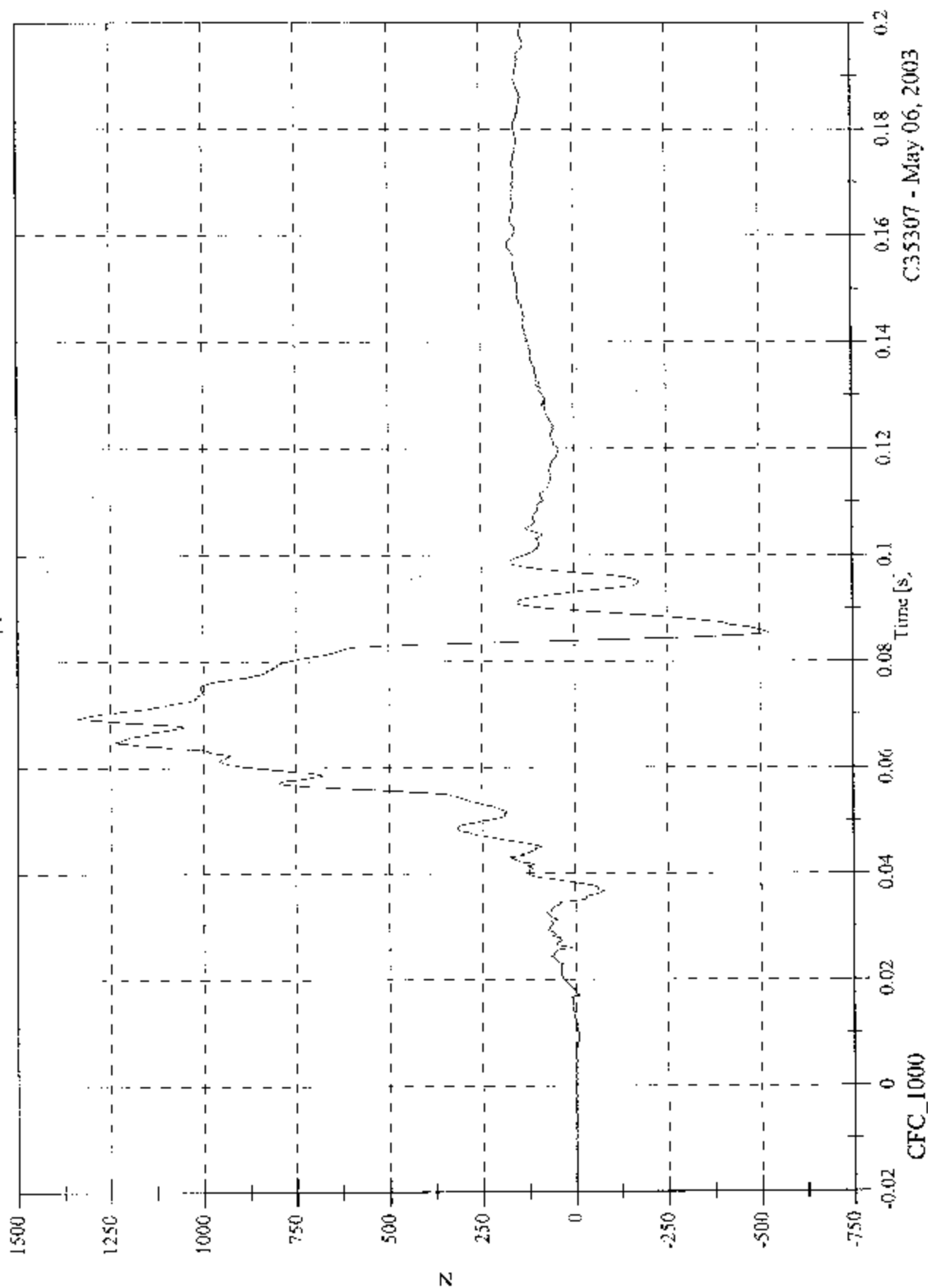


2003 FMVSS 214D Test 8 2003 Honda Element

Max: 1337.0 [N] at 0.069 [s]

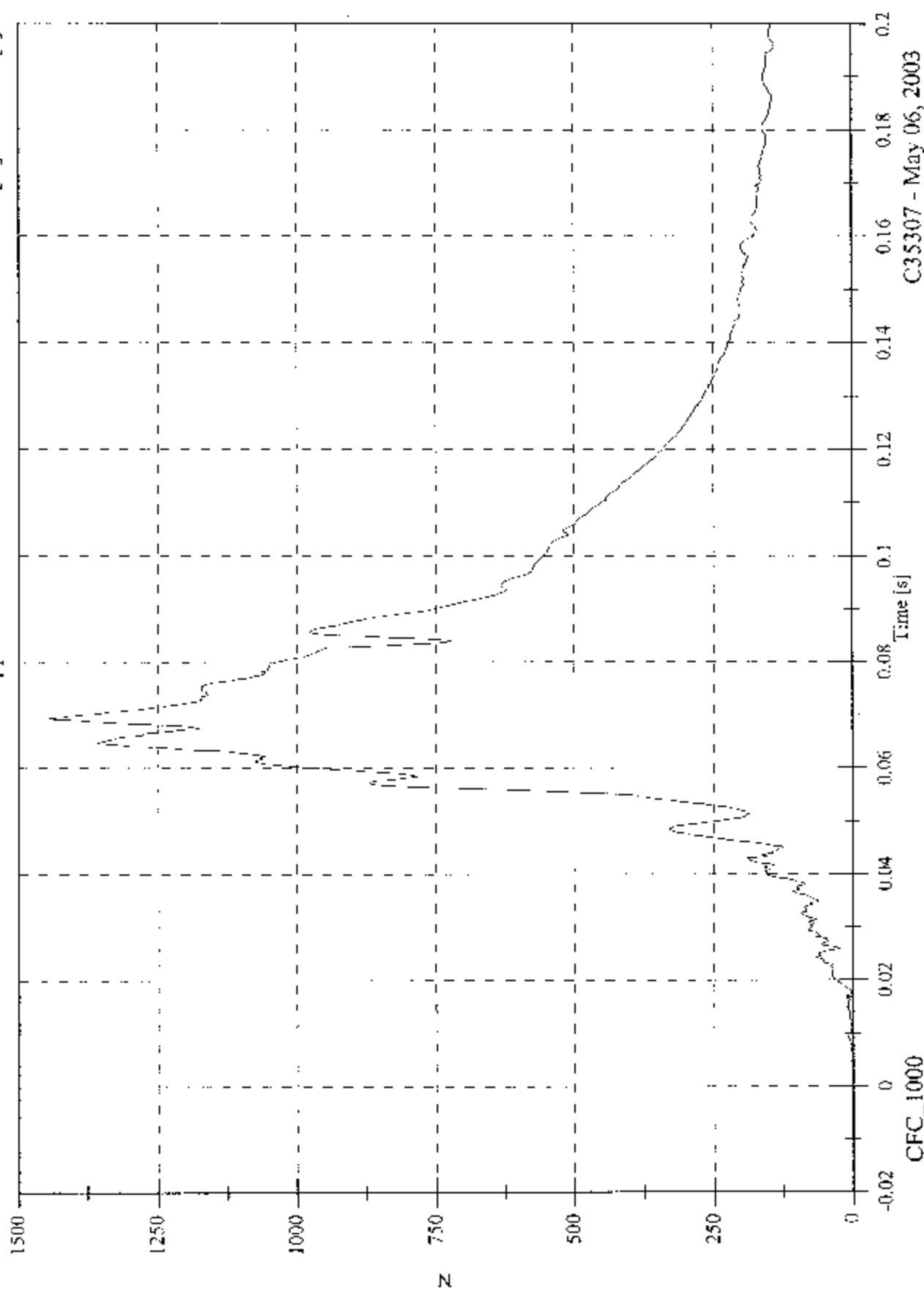
Min: -525.7 [N] at 0.085 [s]

V2P1 Upper Neck Fz



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V2P1 Upper Neck F Resultant

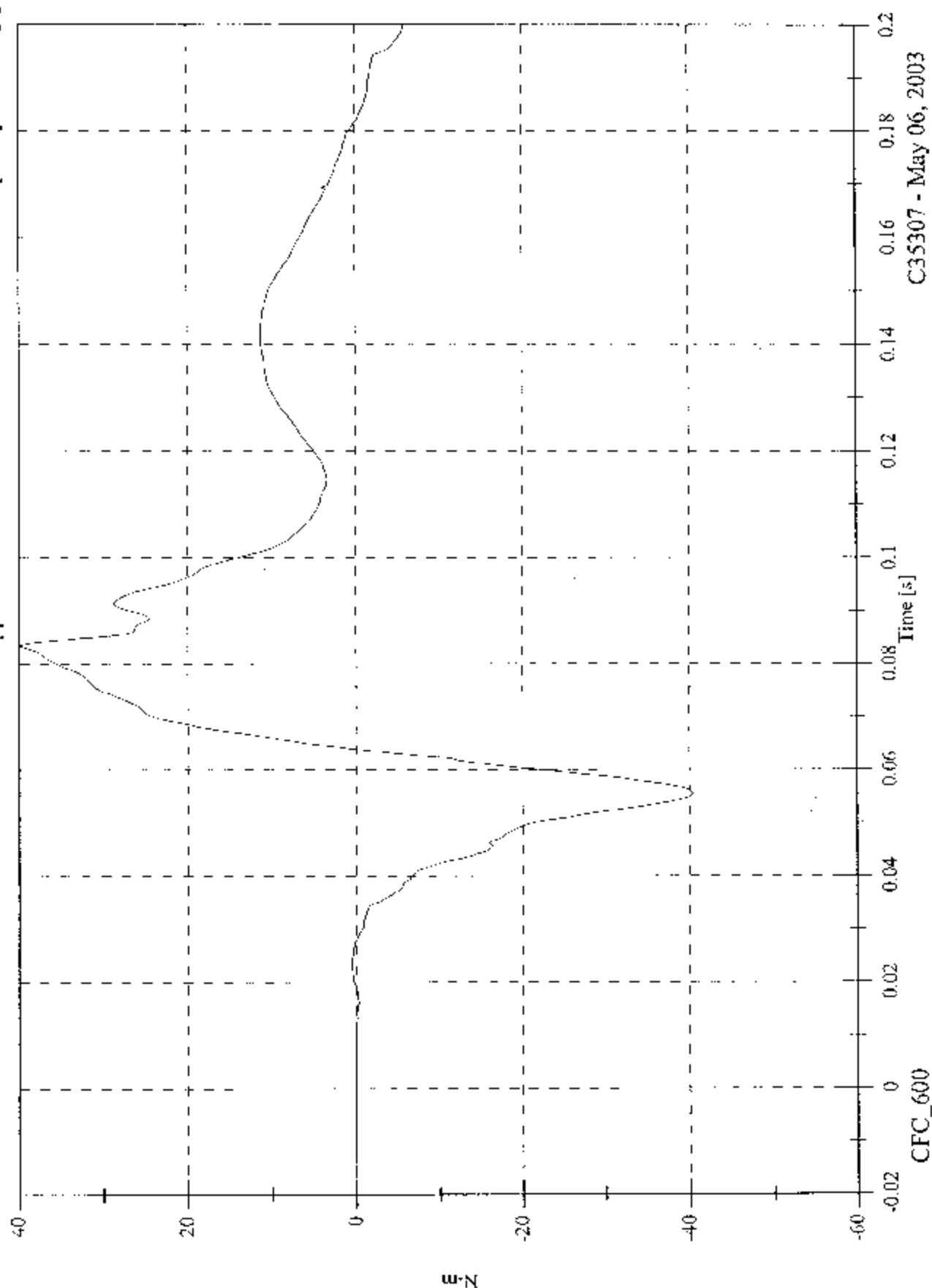


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 39.9 [N-m] at 0.083 [s]
Min: -40.4 [N-m] at 0.055 [s]

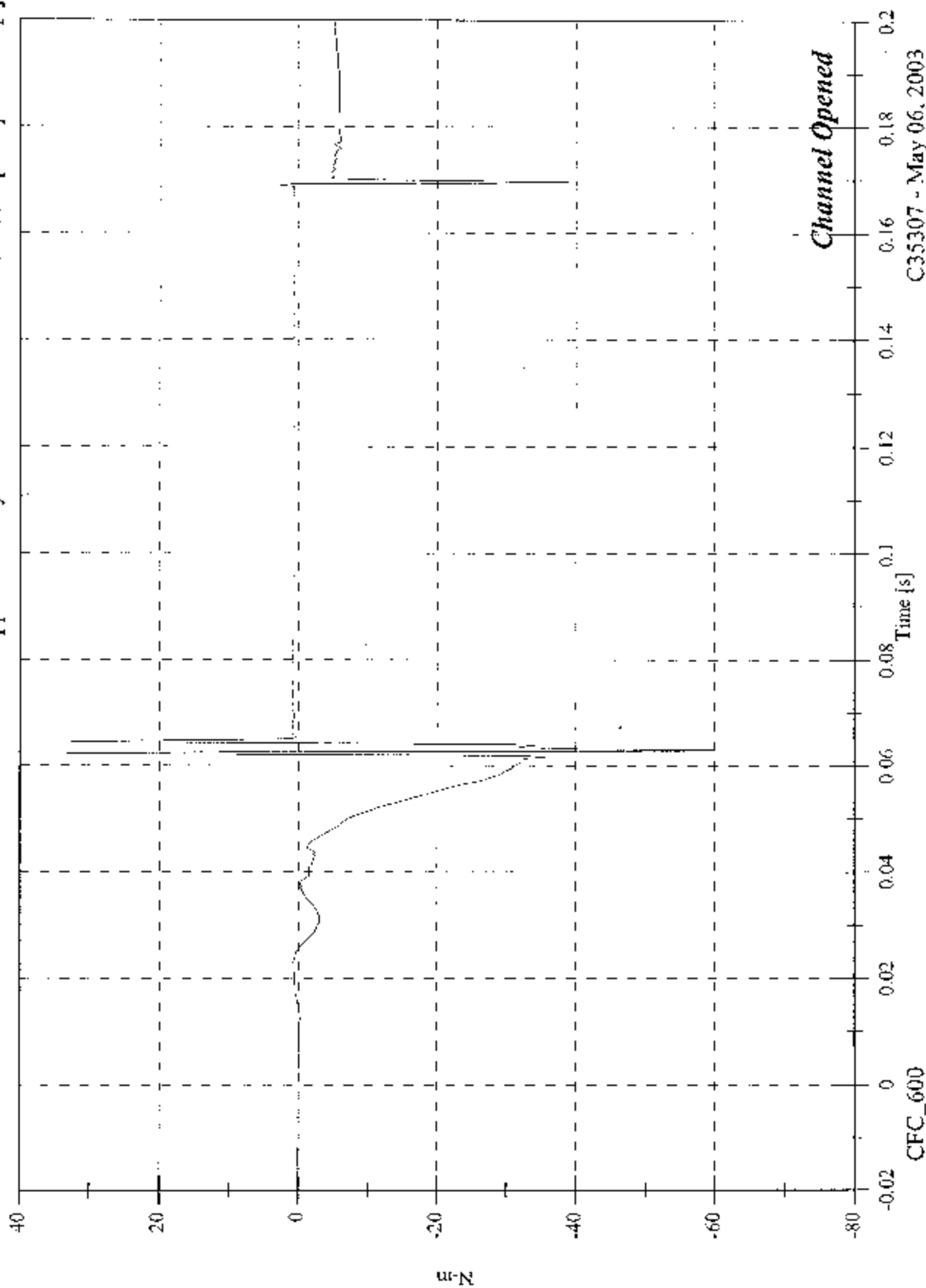
V2P1 Upper Neck Mx



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V2P1 Upper Neck My

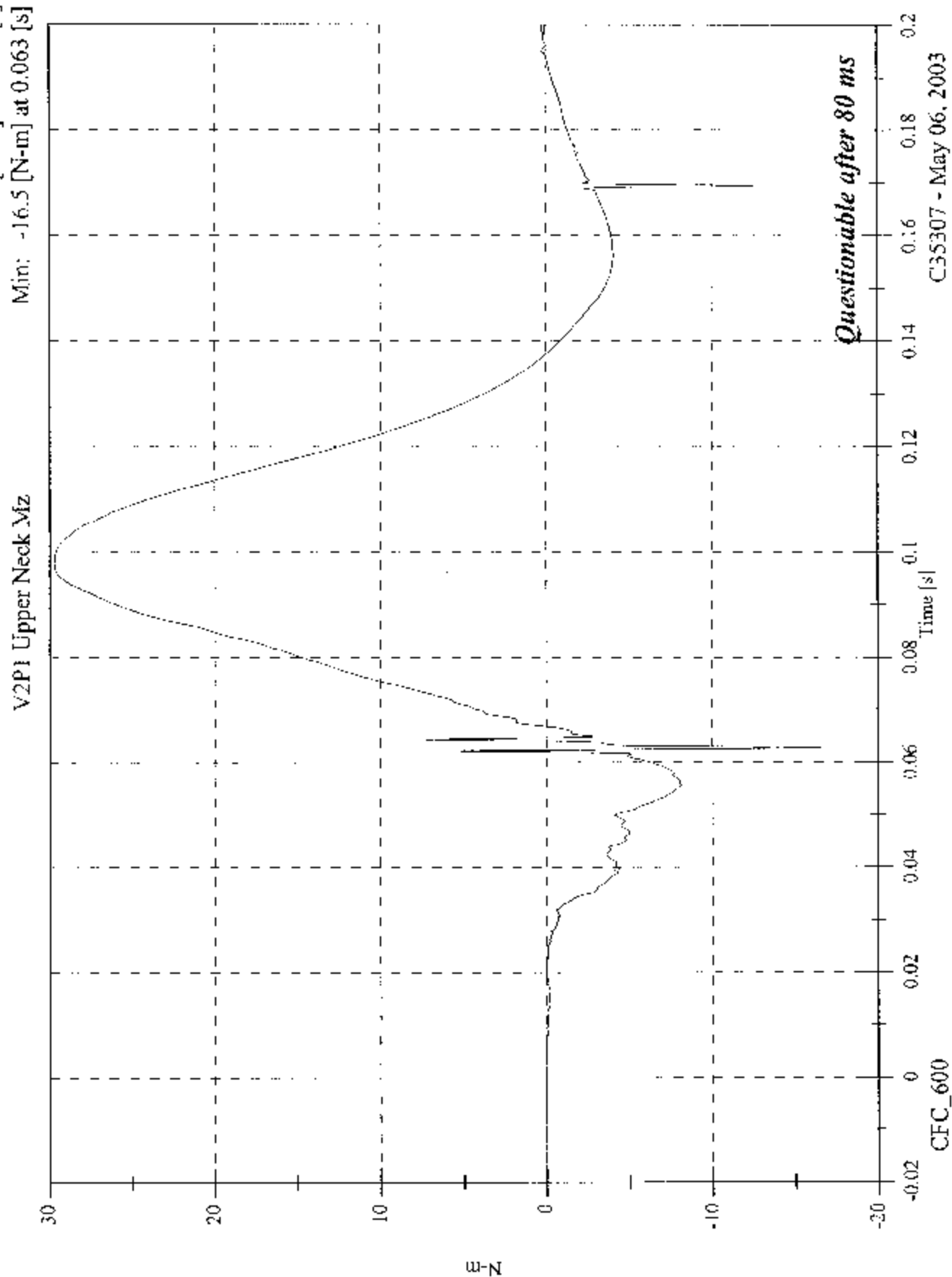
Max: 33.3 [N-m] at 0.062 [s]
Min: -60.8 [N-m] at 0.063 [s]



Channel Opened

C35307 - May 06, 2003

Max: 29.7 [N-m] at 0.098 [s]
Min: -16.5 [N-m] at 0.063 [s]

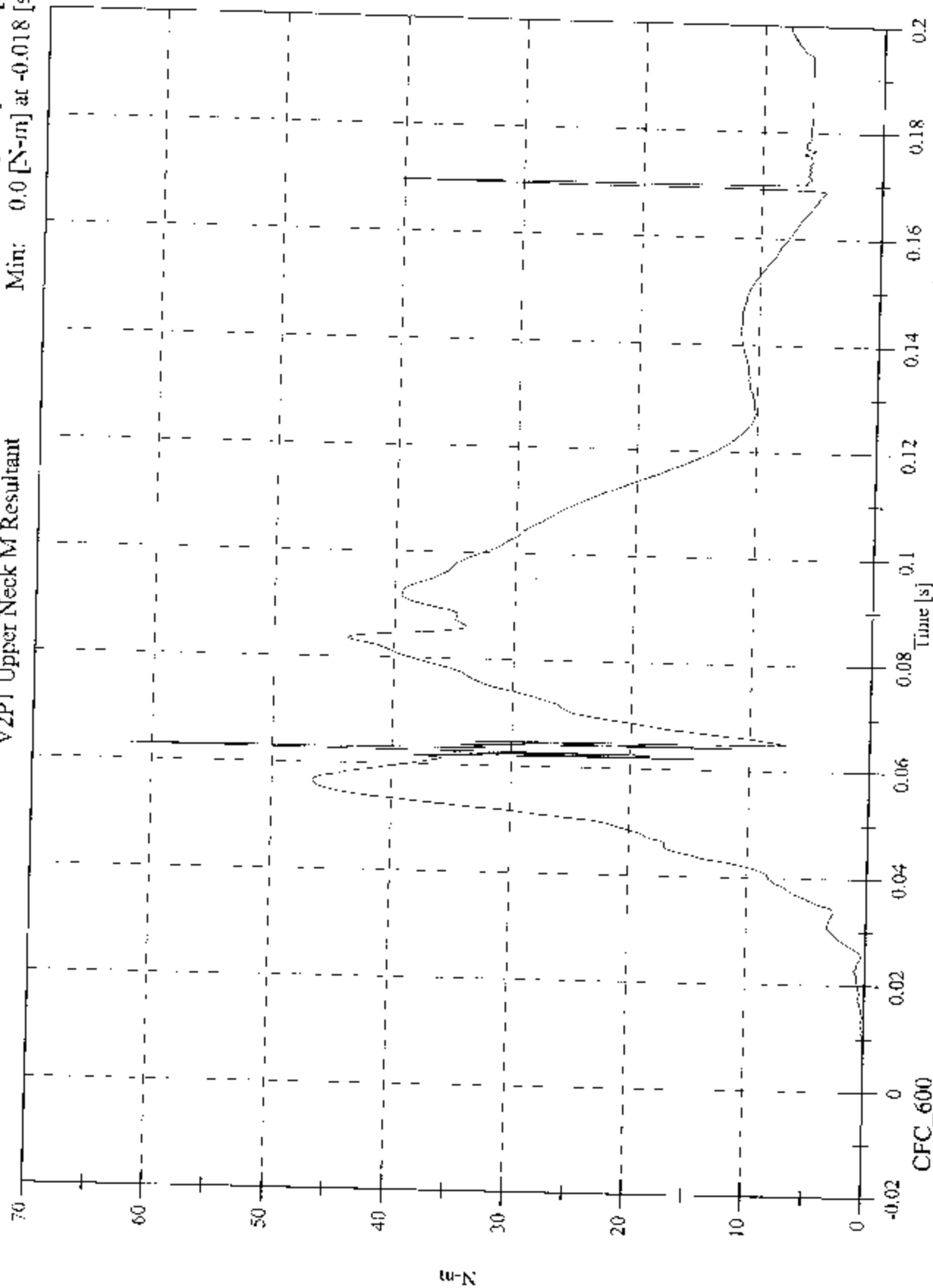


C3S307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Upper Neck M Resultant

Max: 62.1 [N-m] at 0.063 [s]
Min: 0.0 [N-m] at -0.018 [s]



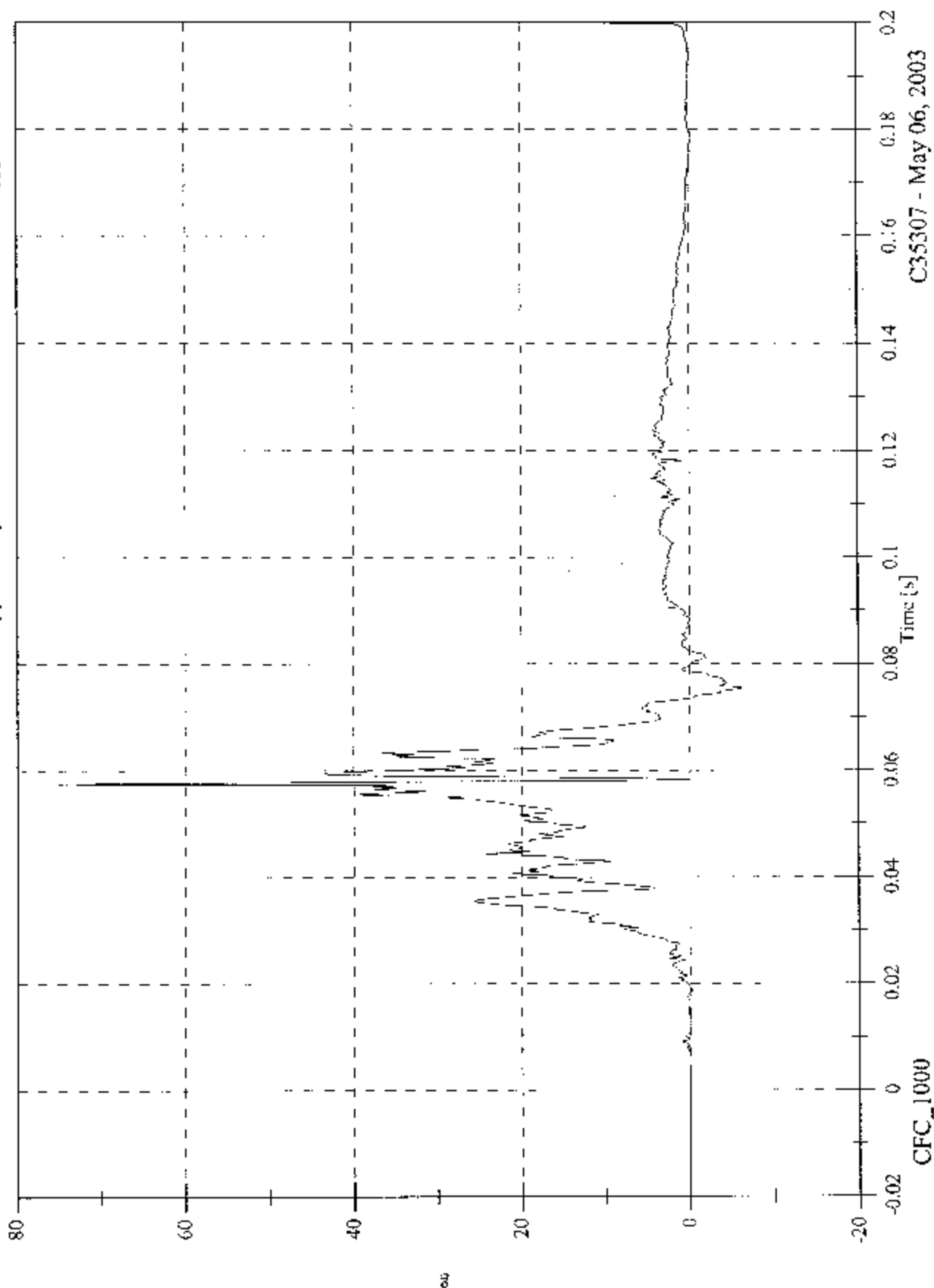
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 77.1 [g] at 0.057 [s]

Min: -6.3 [g] at 0.076 [s]

V2P1 Upper Rib y

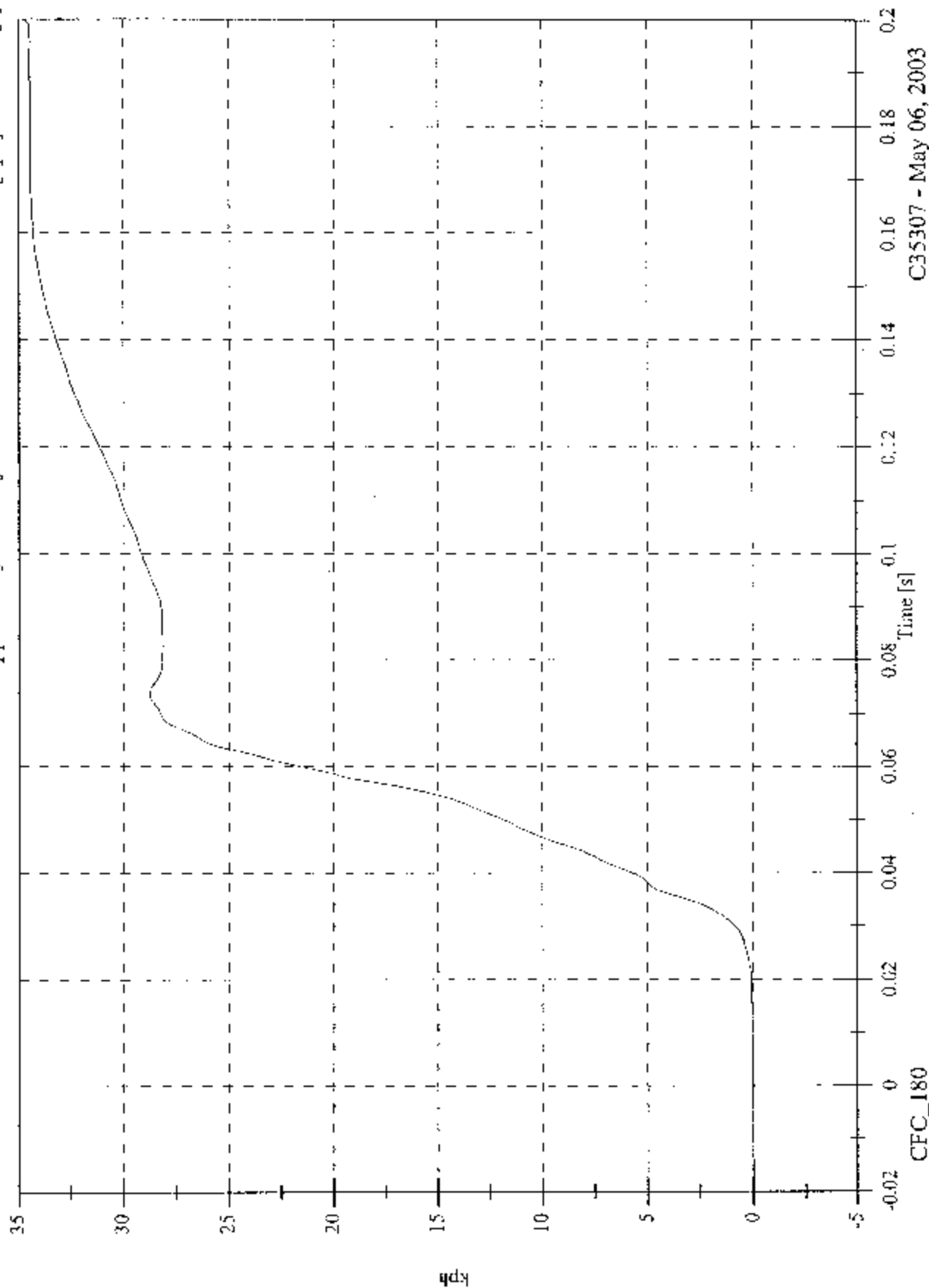


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2003 FMVSS 2J4D Test 8 2003 Honda Element

Max: 34.8 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Upper Rib y Velocity

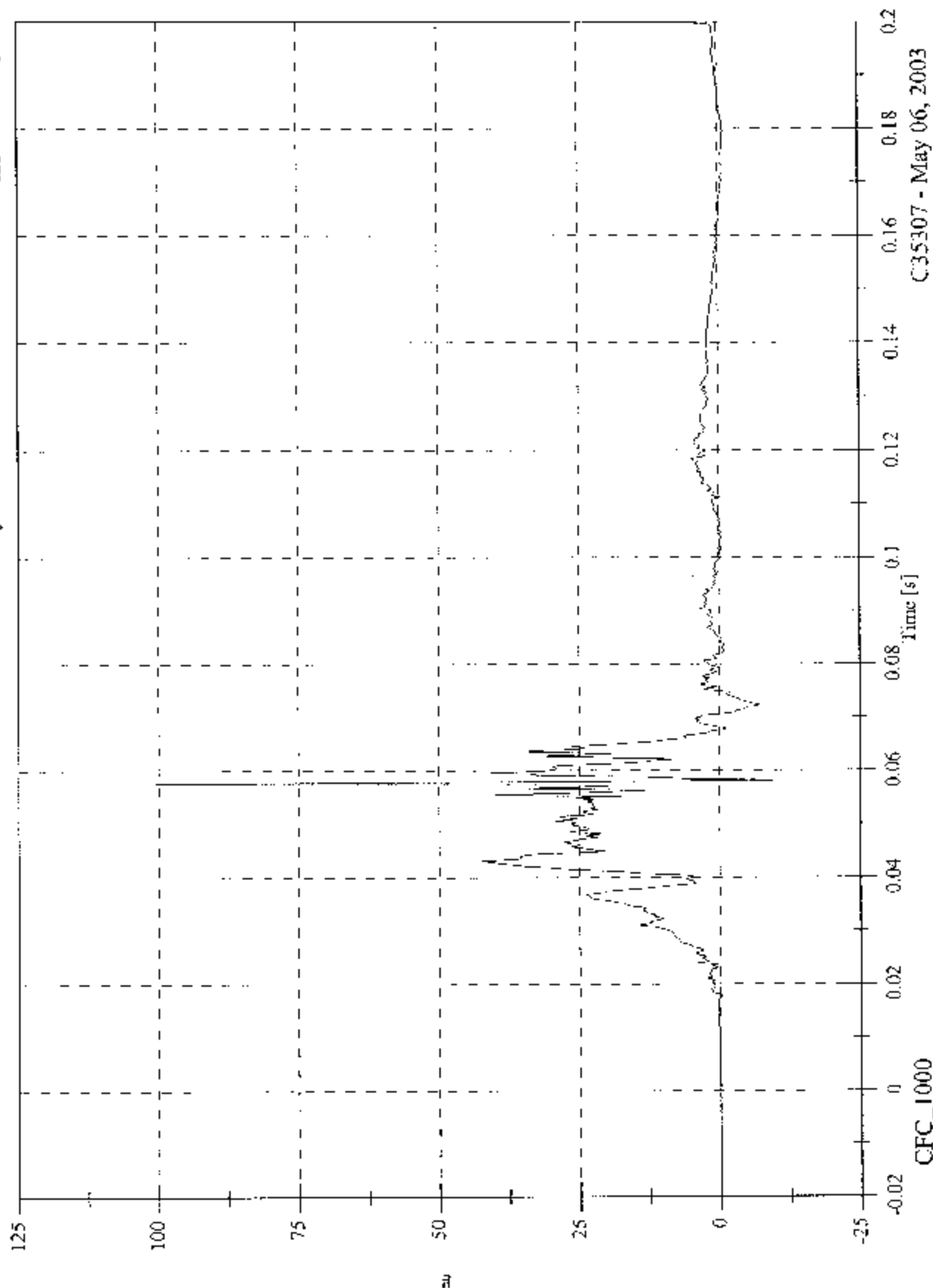


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 100.6 [g] at 0.058 [s]
Min: -11.6 [g] at 0.058 [s]

V2P1 Lower Rib y

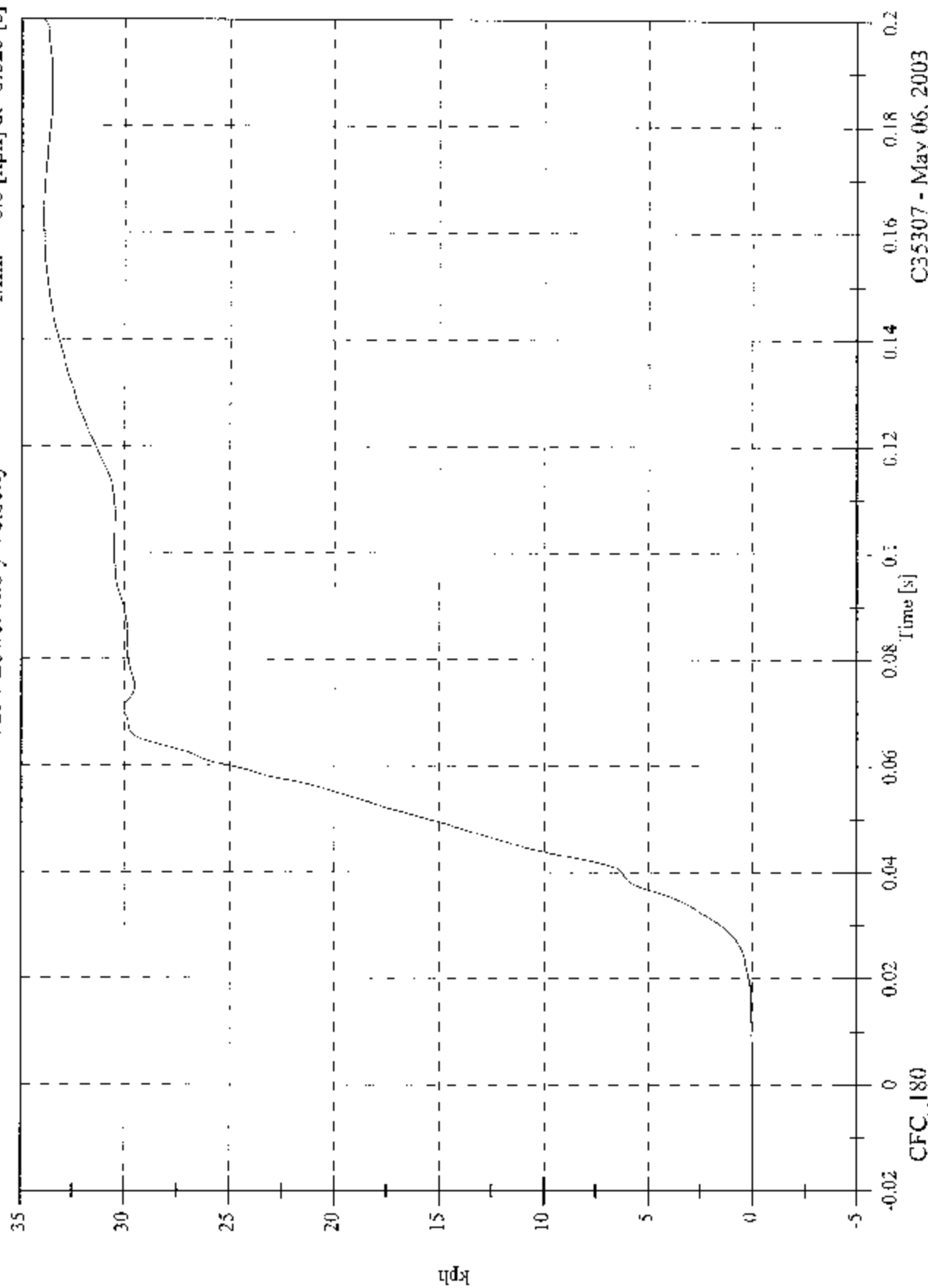


CFC_1000

C35307 - May 06, 2003

Max: 34.0 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Rib y Velocity

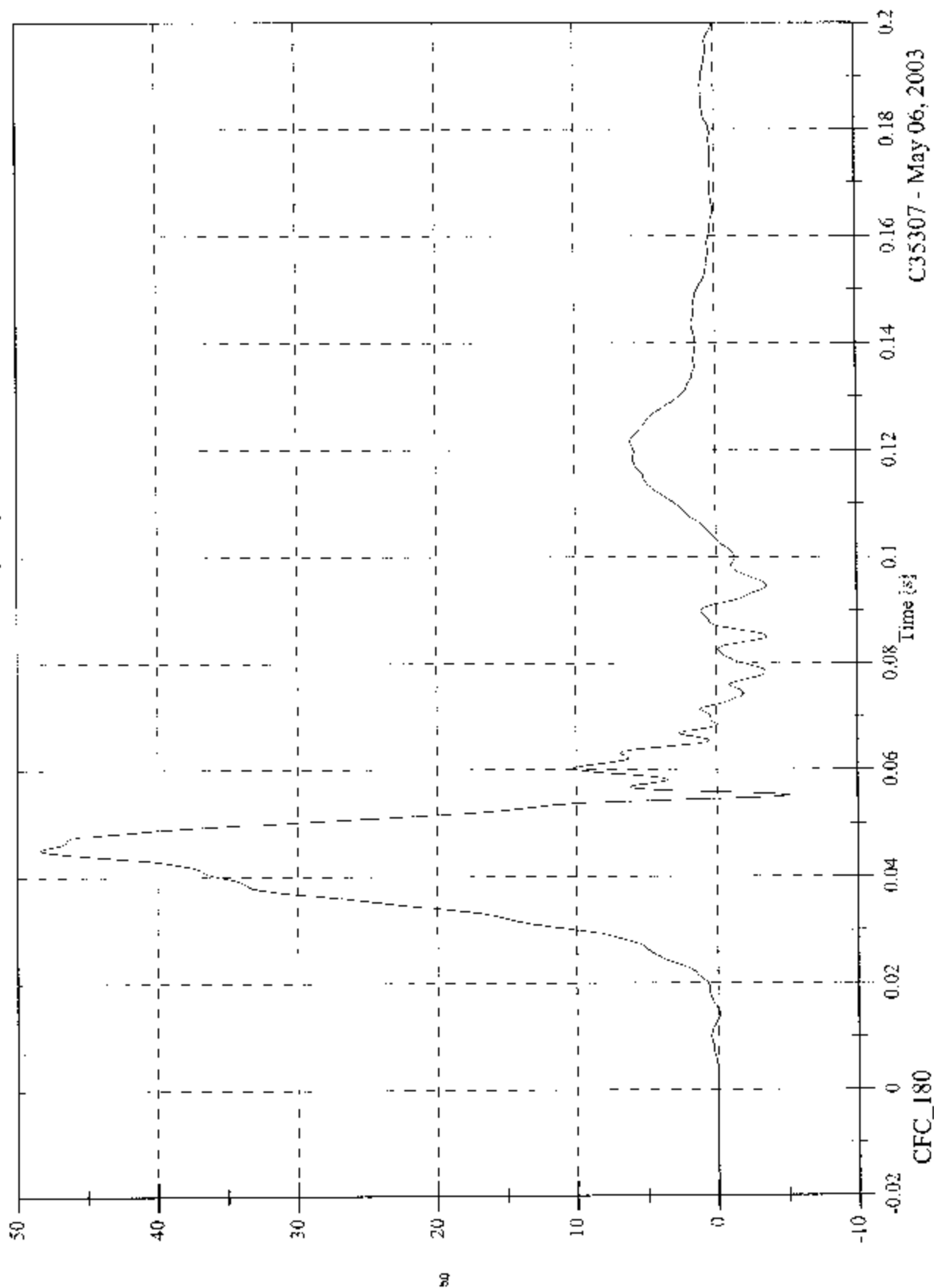


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 48.3 [g] at 0.045 [s]
Min: -5.1 [g] at 0.055 [s]

V2P1 Lower Spine y

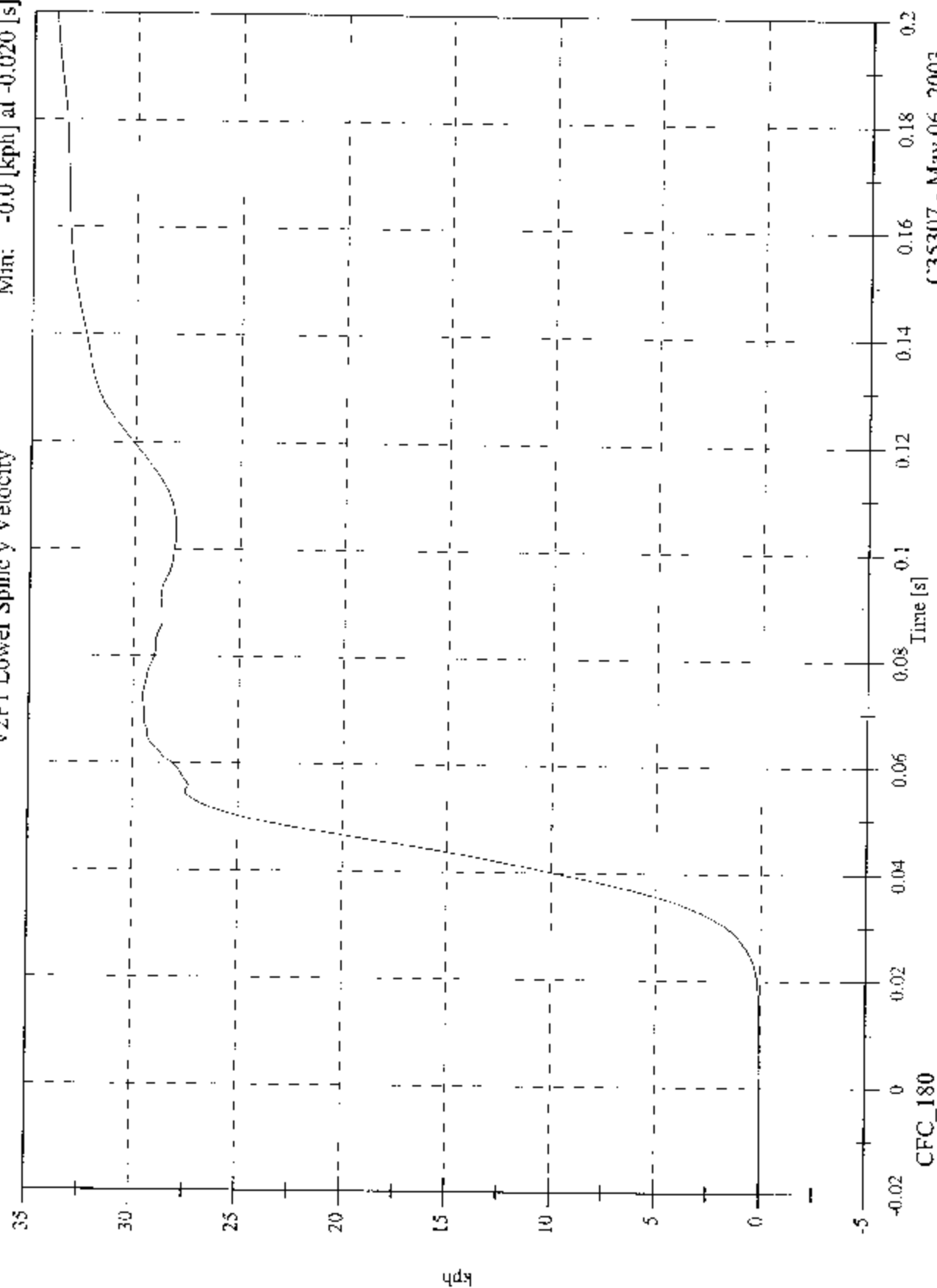


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 33.9 [kph] at 0.200 [s]
 Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Spine y Velocity



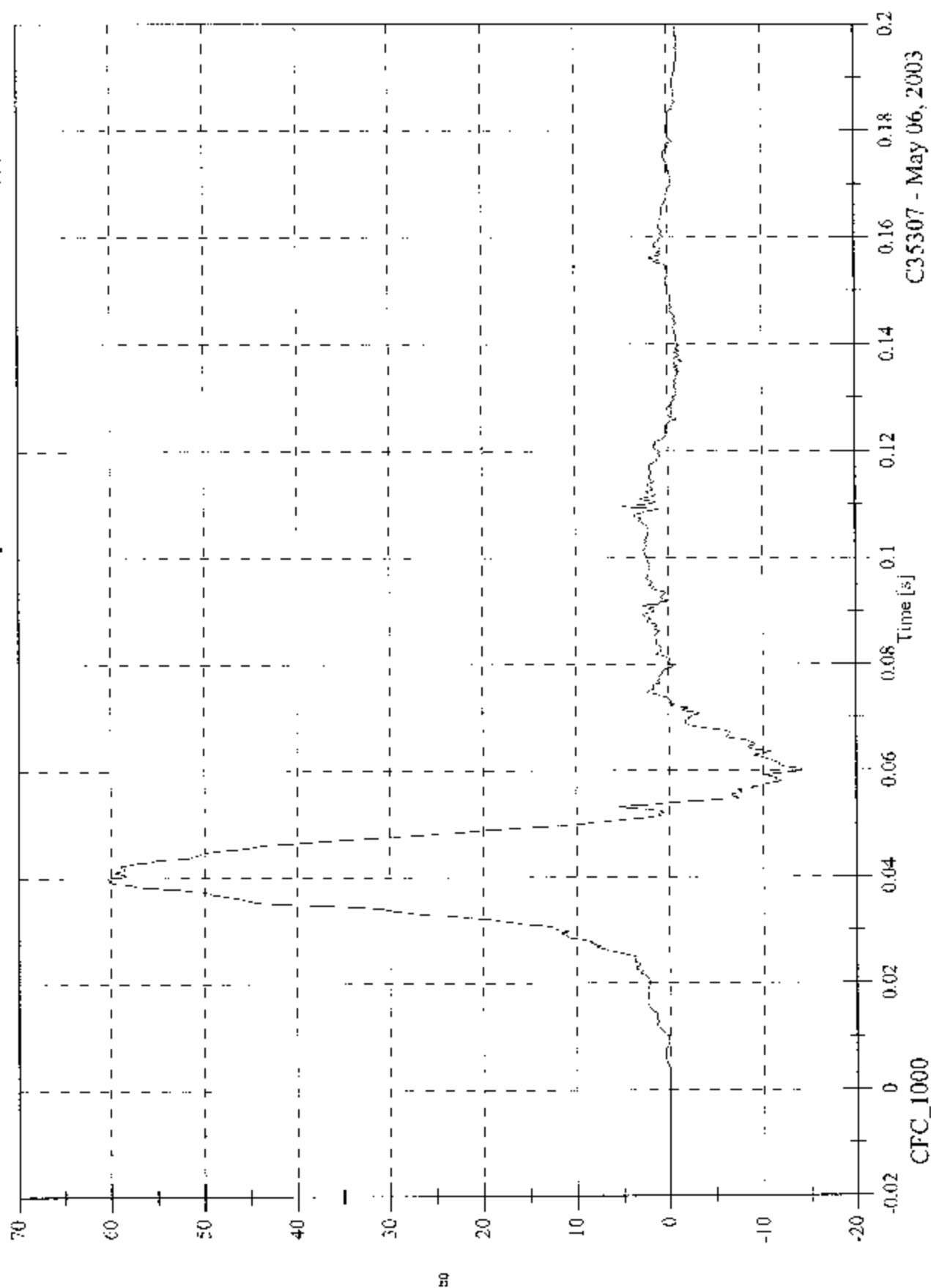
CFC_180

C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 60.3 [g] at 0.040 [s]
Min: -14.2 [g] at 0.060 [s]

V2PI Pelvic y

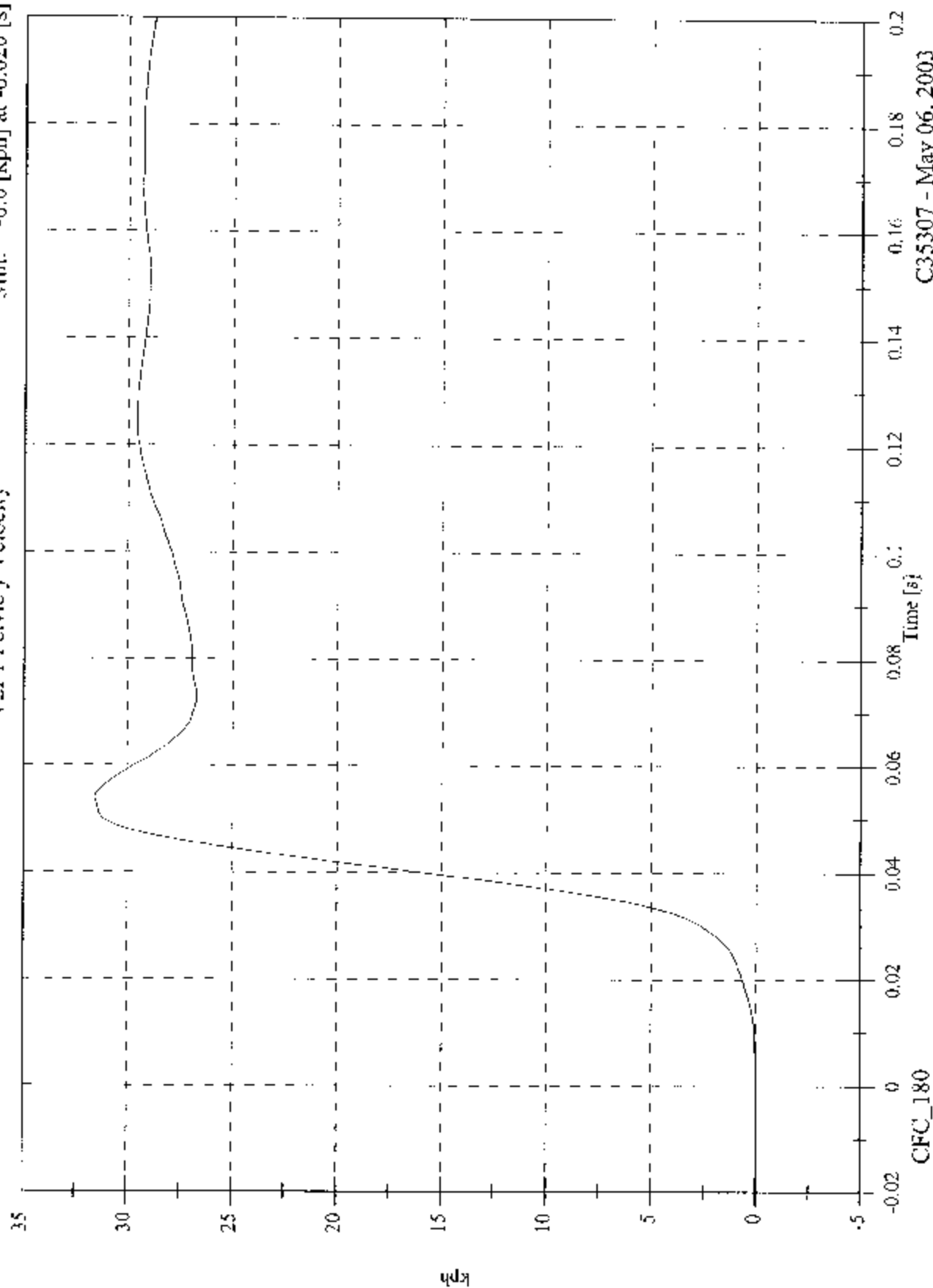


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 31.6 [kph] at 0.054 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Pelvic y Velocity

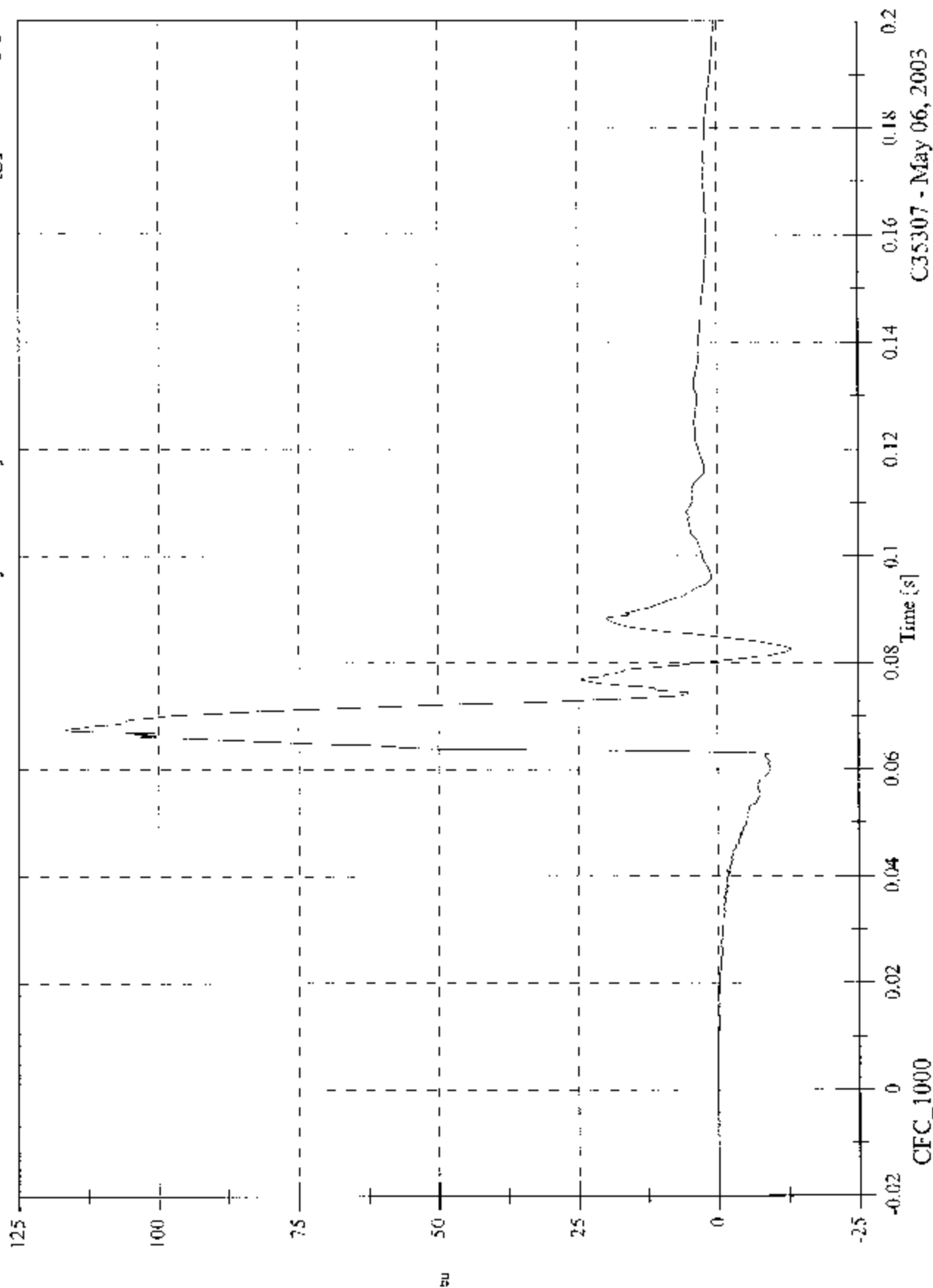


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Ay

Max: 116.6 [g] at 0.067 [s]
Min: -13.0 [g] at 0.083 [s]

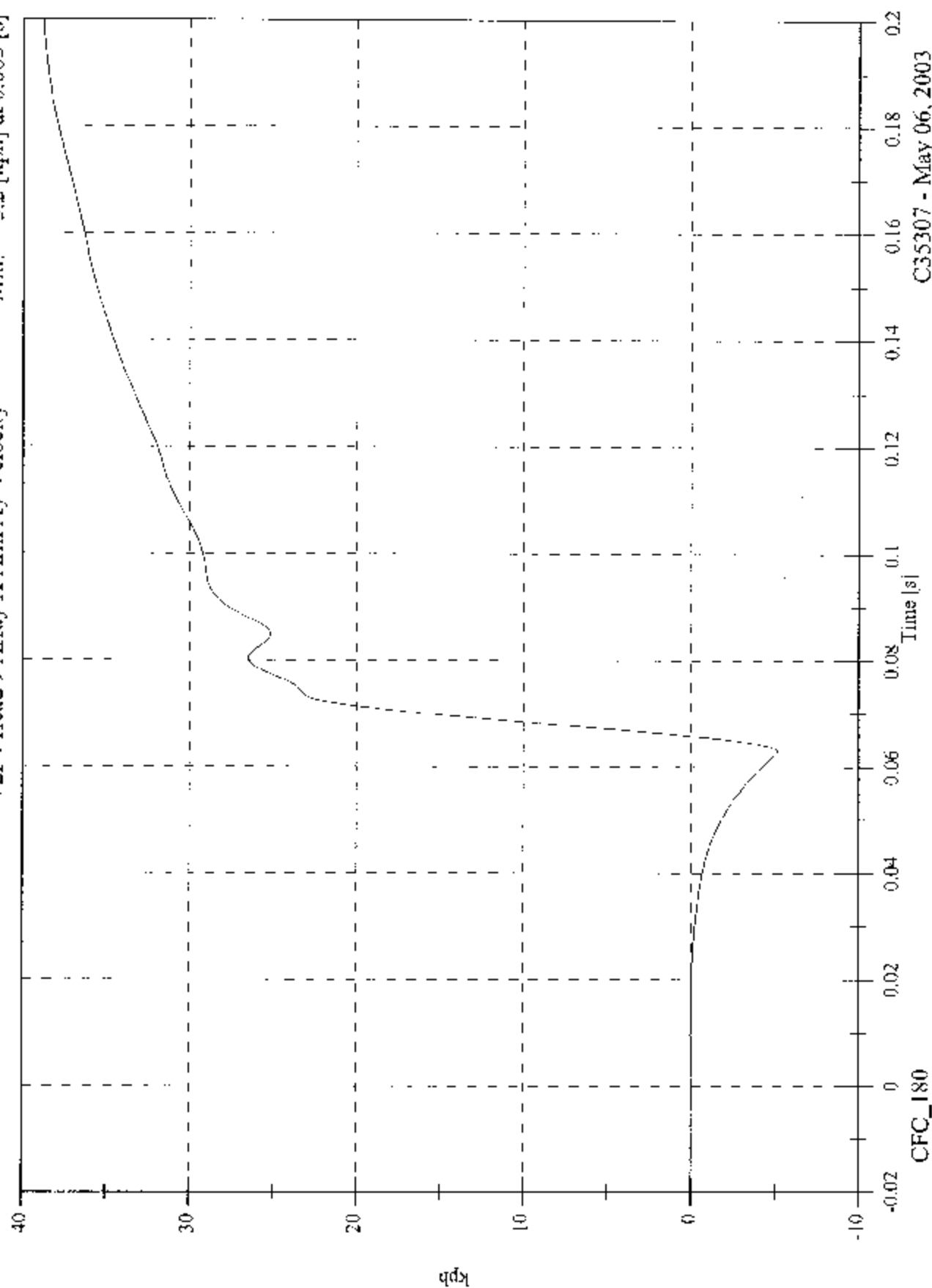


2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Ay Velocity

Max: 38.8 [kph] at 0.200 [s]

Min: -5.2 [kph] at 0.063 [s]



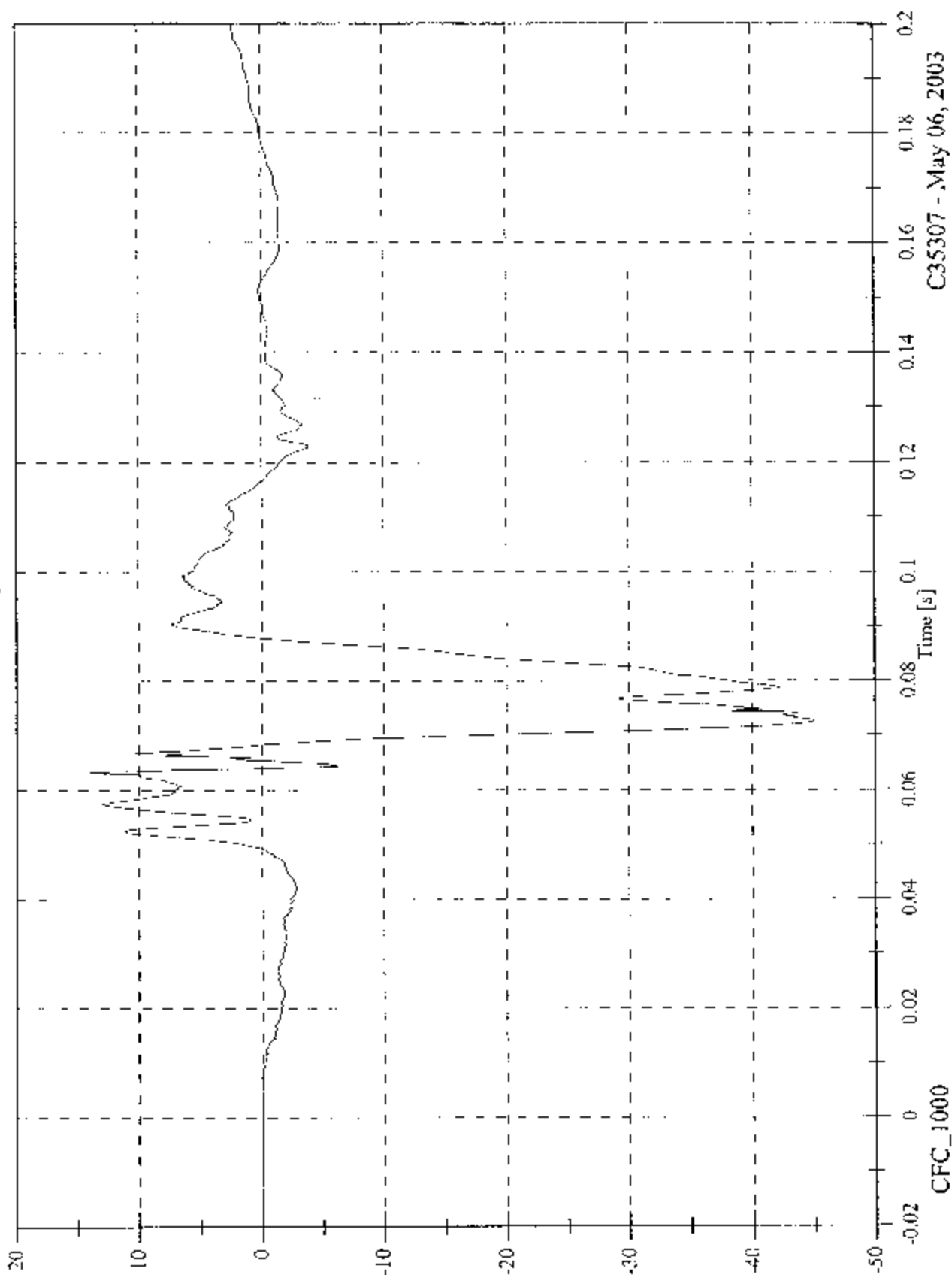
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Az

Max: 14.0 [g] at 0.063 [s]

Min: -45.0 [g] at 0.072 [s]

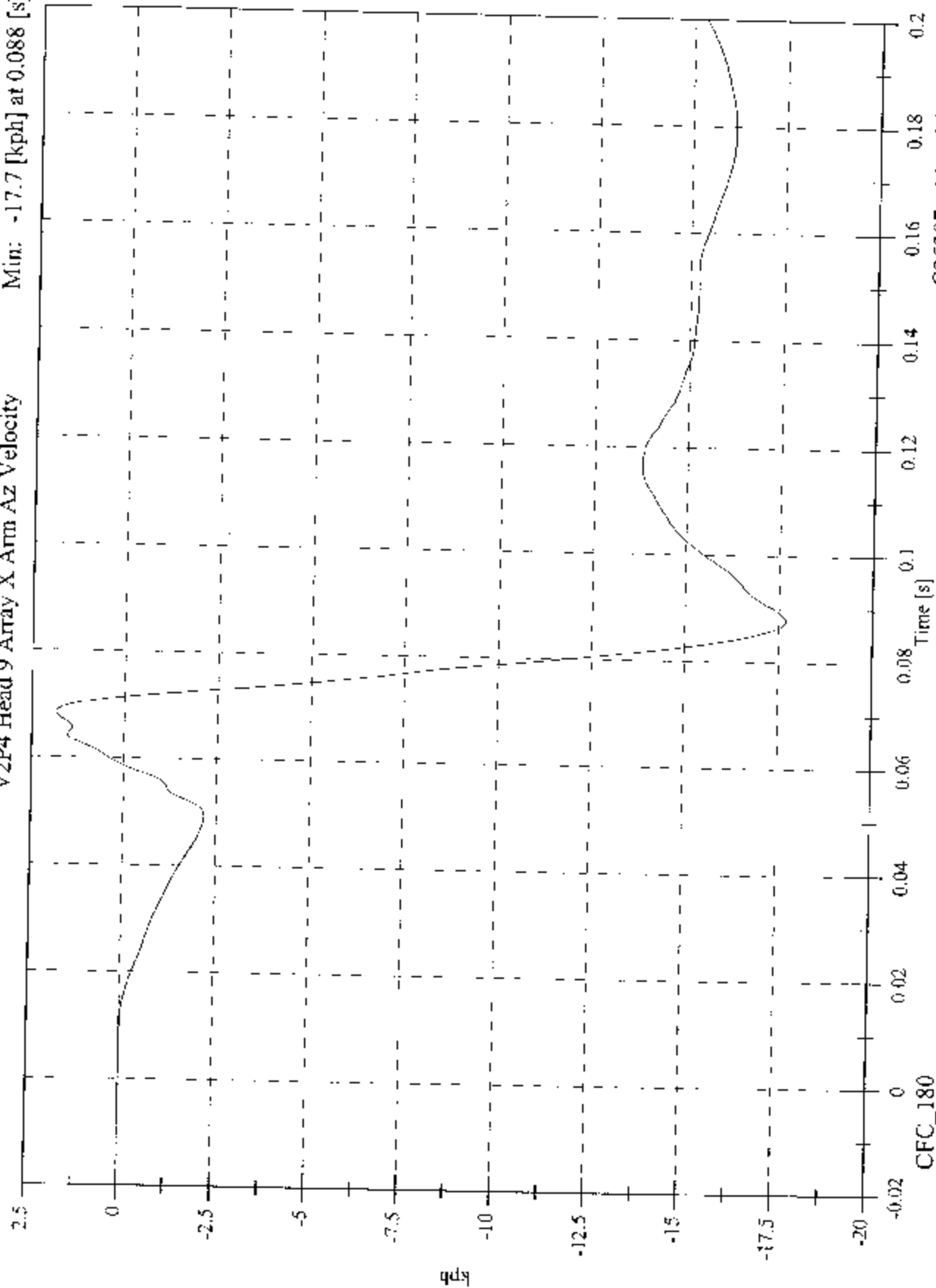


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array X Arm Az Velocity

Max: 1.8 [kph] at 0.068 [s]
Min: -17.7 [kph] at 0.088 [s]

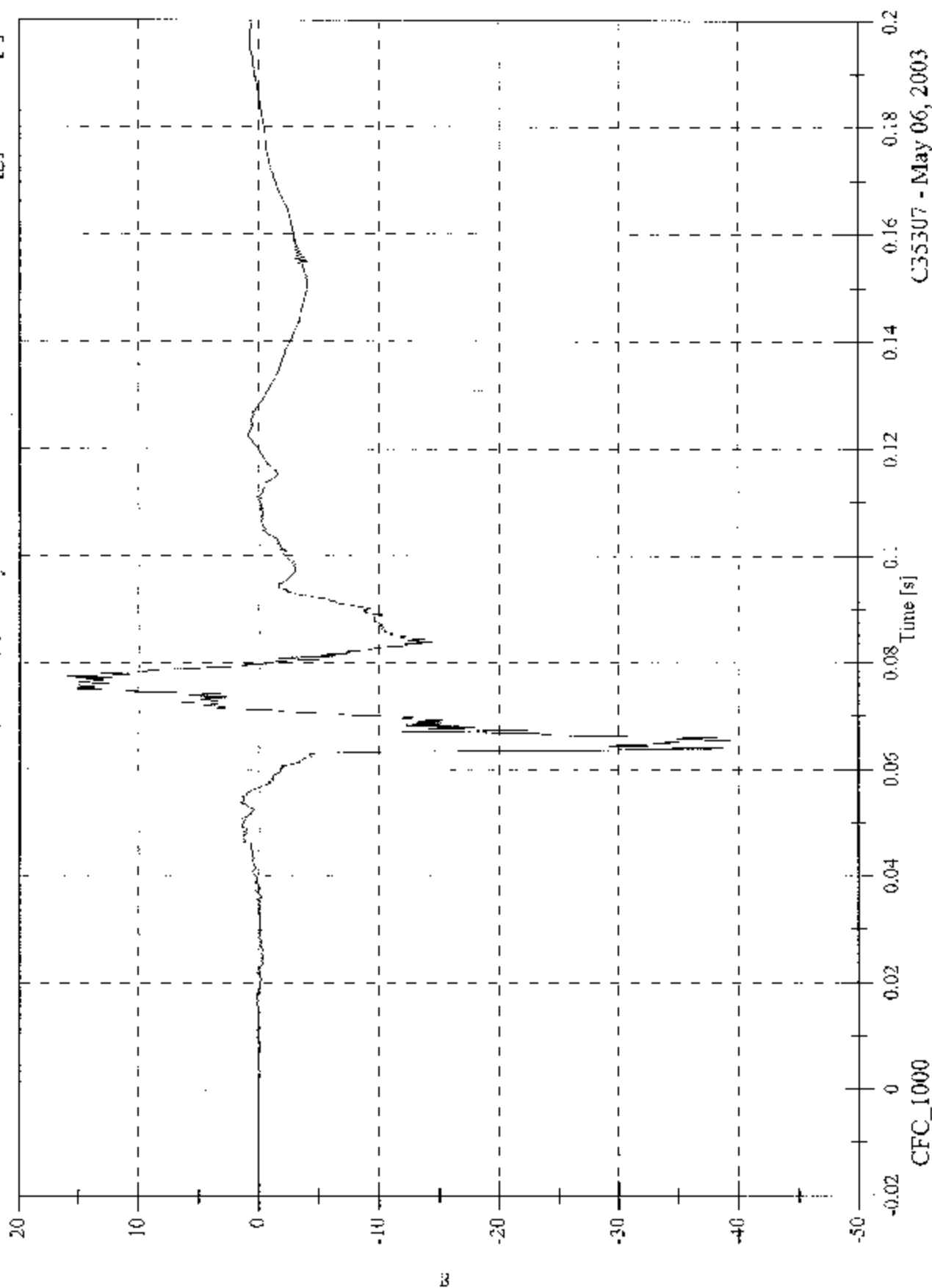


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Ax

Max: 16.3 [g] at 0.077 [s]
Min: -41.1 [g] at 0.064 [s]

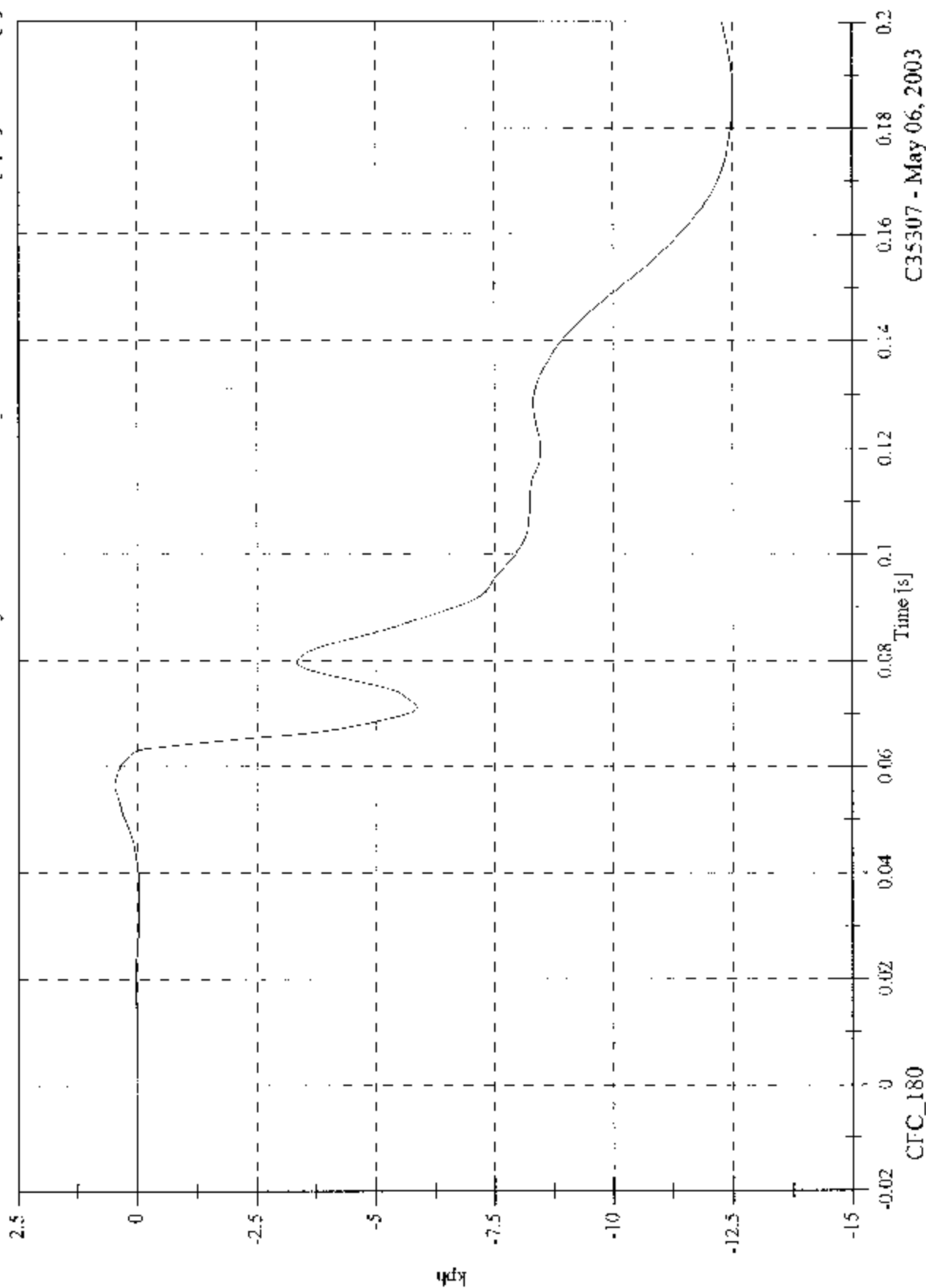


C355307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Ax Velocity

Max: 0.5 [kph] at 0.057 [s]
Min: -12.5 [kph] at 0.186 [s]

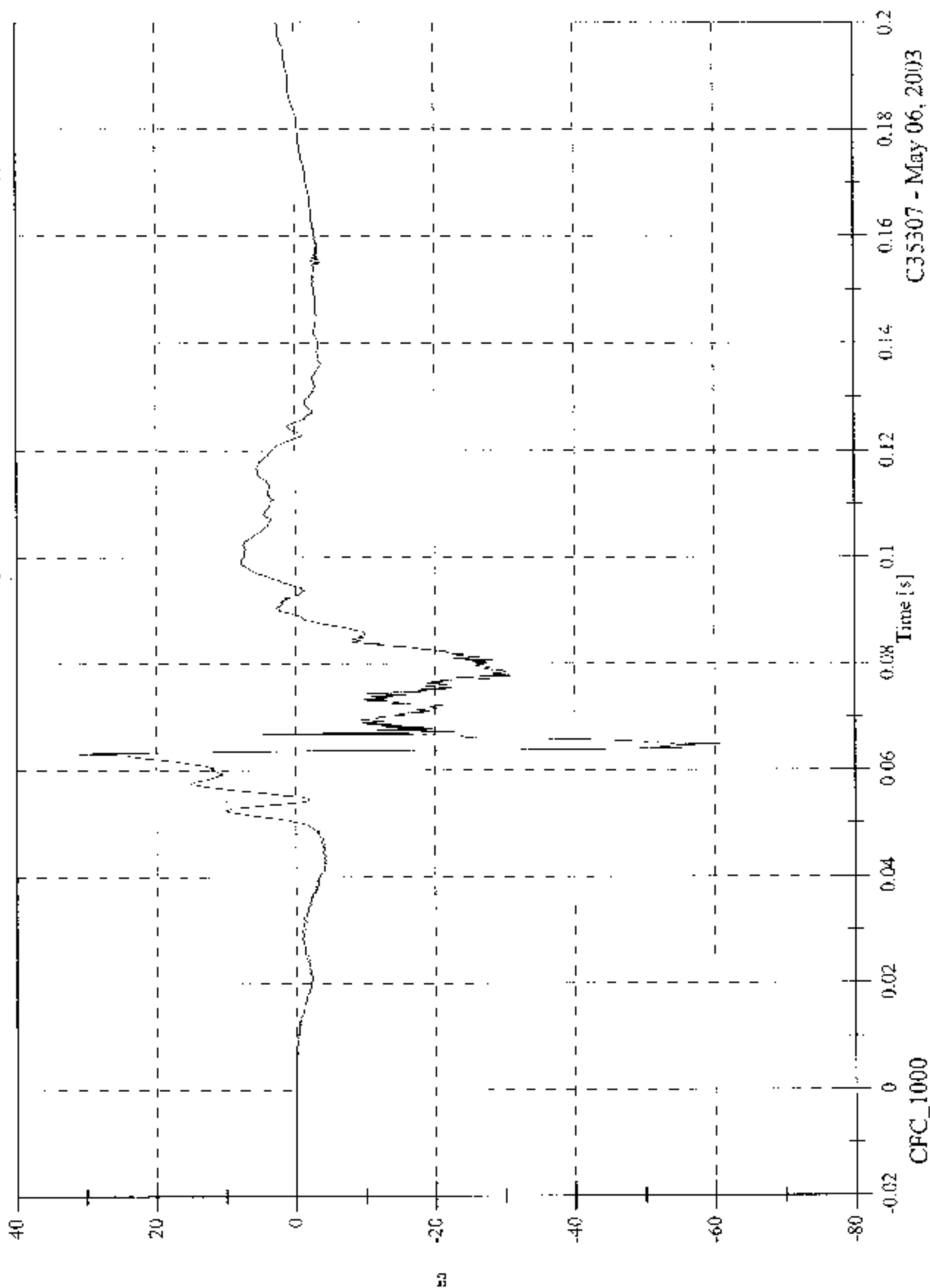


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Az

Max: 31.2 [g] at 0.063 [s]
Nmin: -60.7 [g] at 0.065 [s]

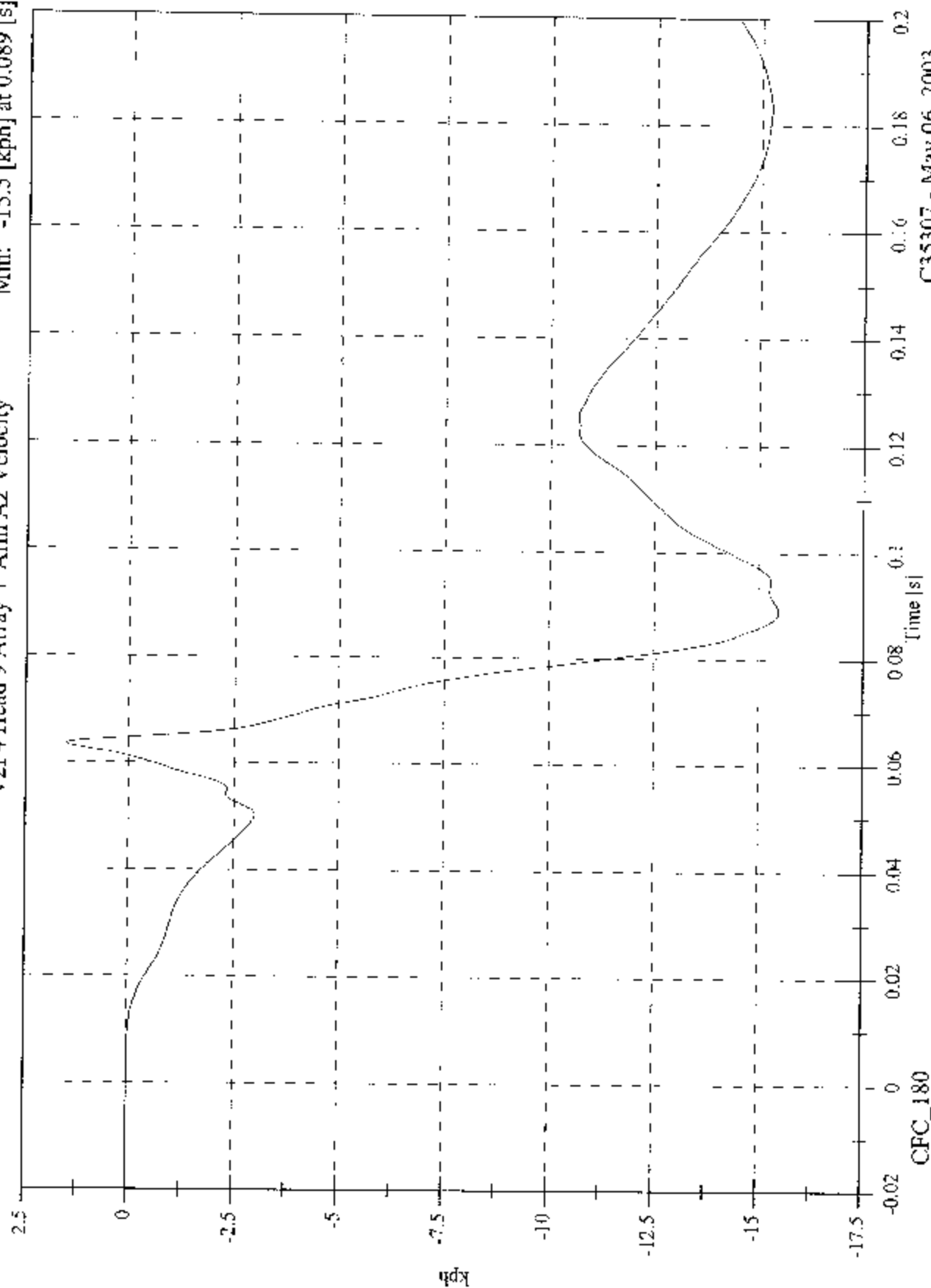


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Y Arm Az Velocity

Max: 1.5 [kph] at 0.063 [s]
Min: -15.5 [kph] at 0.089 [s]

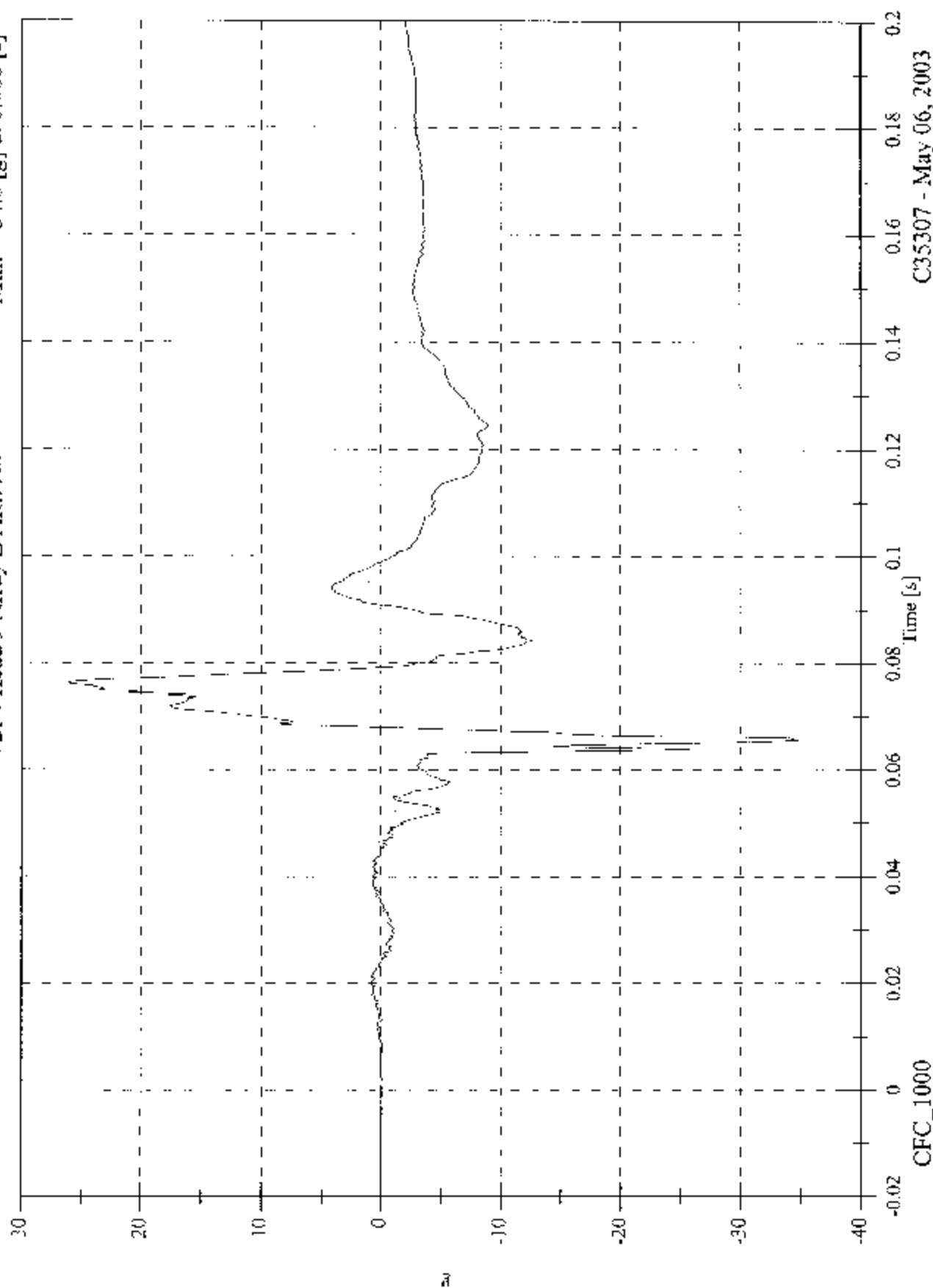


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z Arm Ax

Max: 26.1 [g] at 0.076 [s]
Min: -34.8 [g] at 0.066 [s]

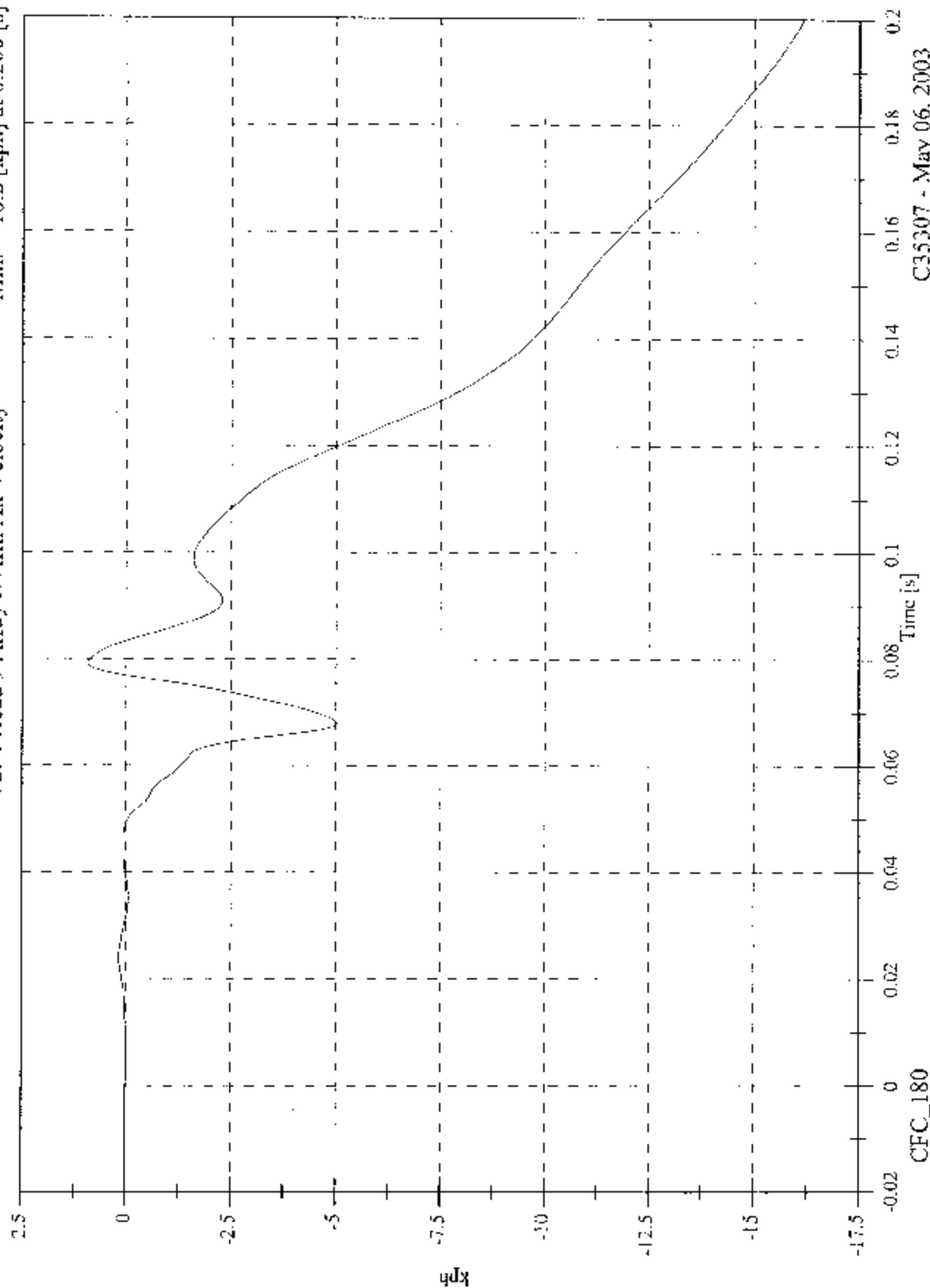


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.9 [kph] at 0.079 [s]
 Min: -16.2 [kph] at 0.200 [s]

V2P4 Head 9 Array Z Arm Ax Velocity

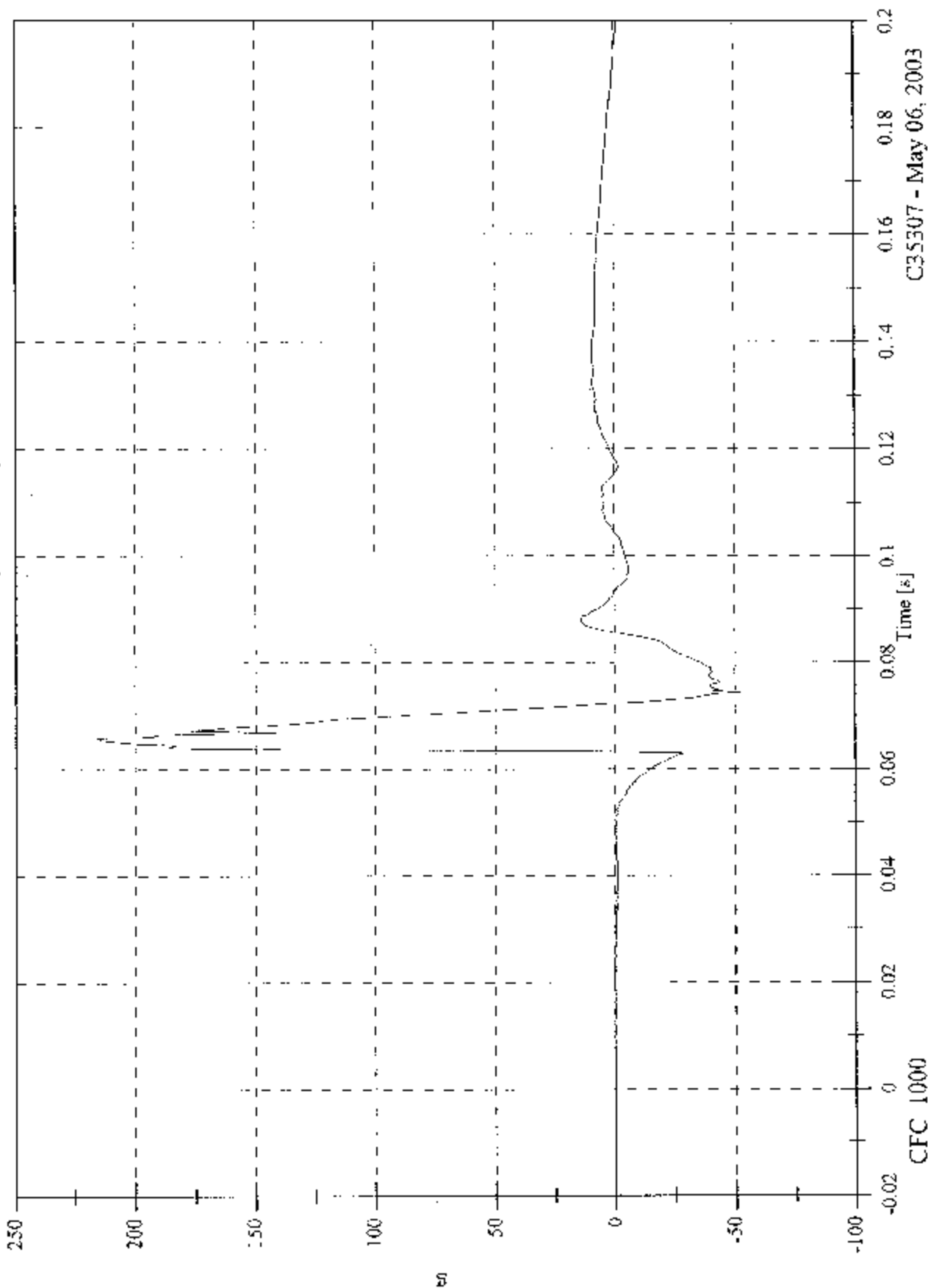


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z Arm Ay

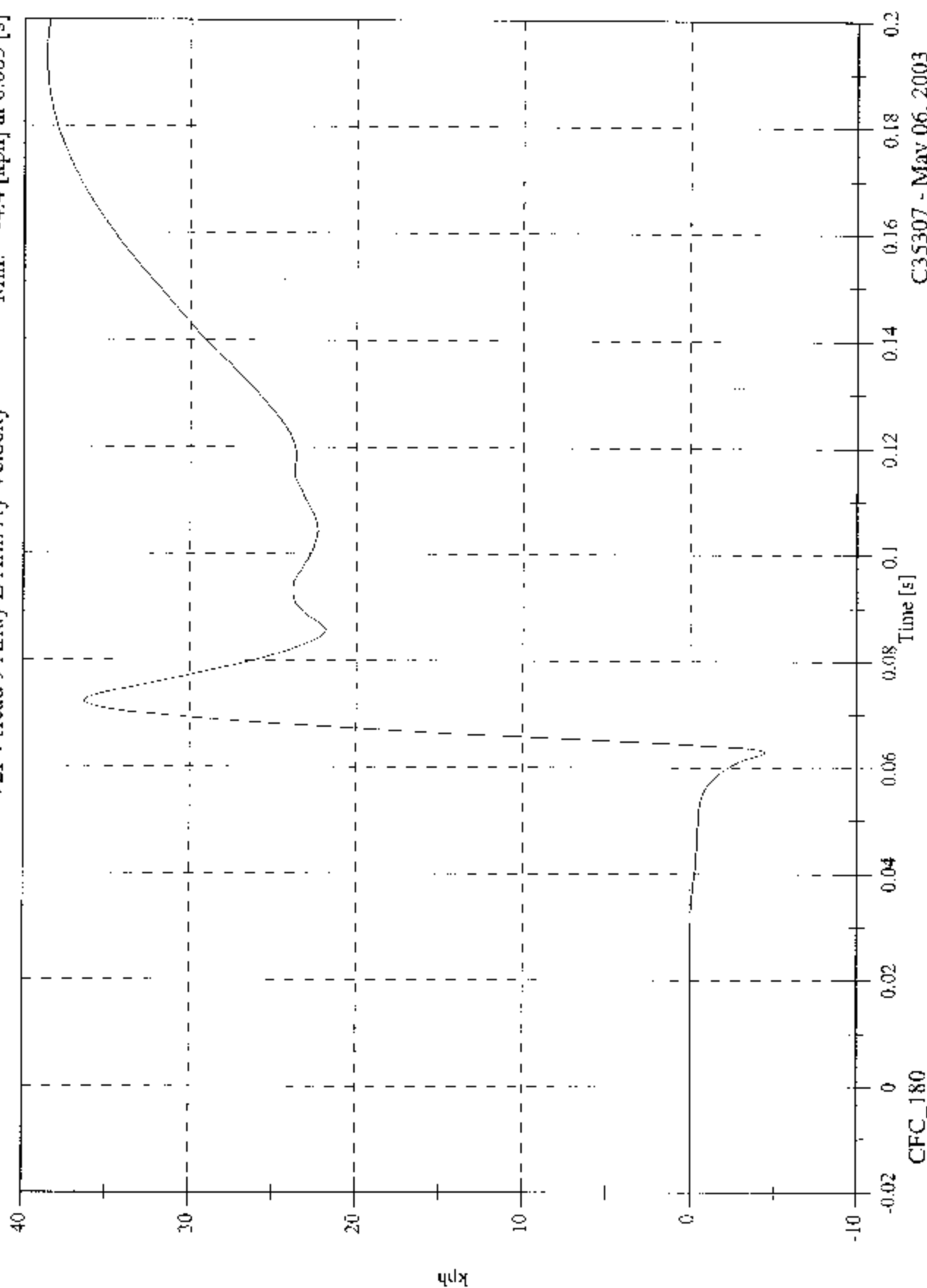
Max: 215.7 [g] at 0.066 [s]
Min: -52.4 [g] at 0.074 [s]



2003 F/VVSS 214D Test 8 2003 Honda Element

V2P4 Head 9 Array Z Arm Ay Velocity

Max: 38.6 [kph] at 0.193 [s]
Min: -4.4 [kph] at 0.063 [s]

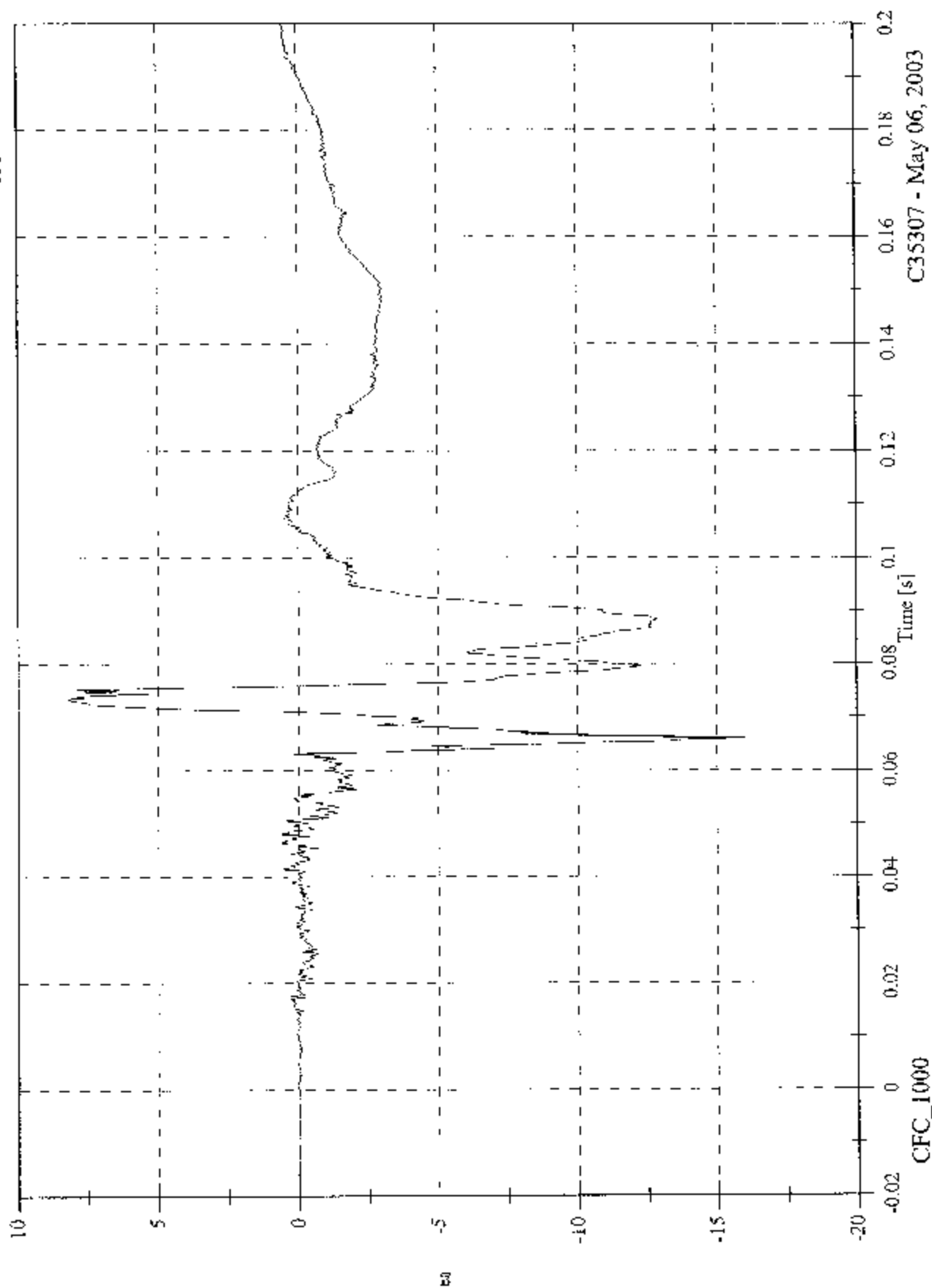


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 8.4 [g] at 0.073 [s]
Min: -16.1 [g] at 0.066 [s]

V2P4 Head x

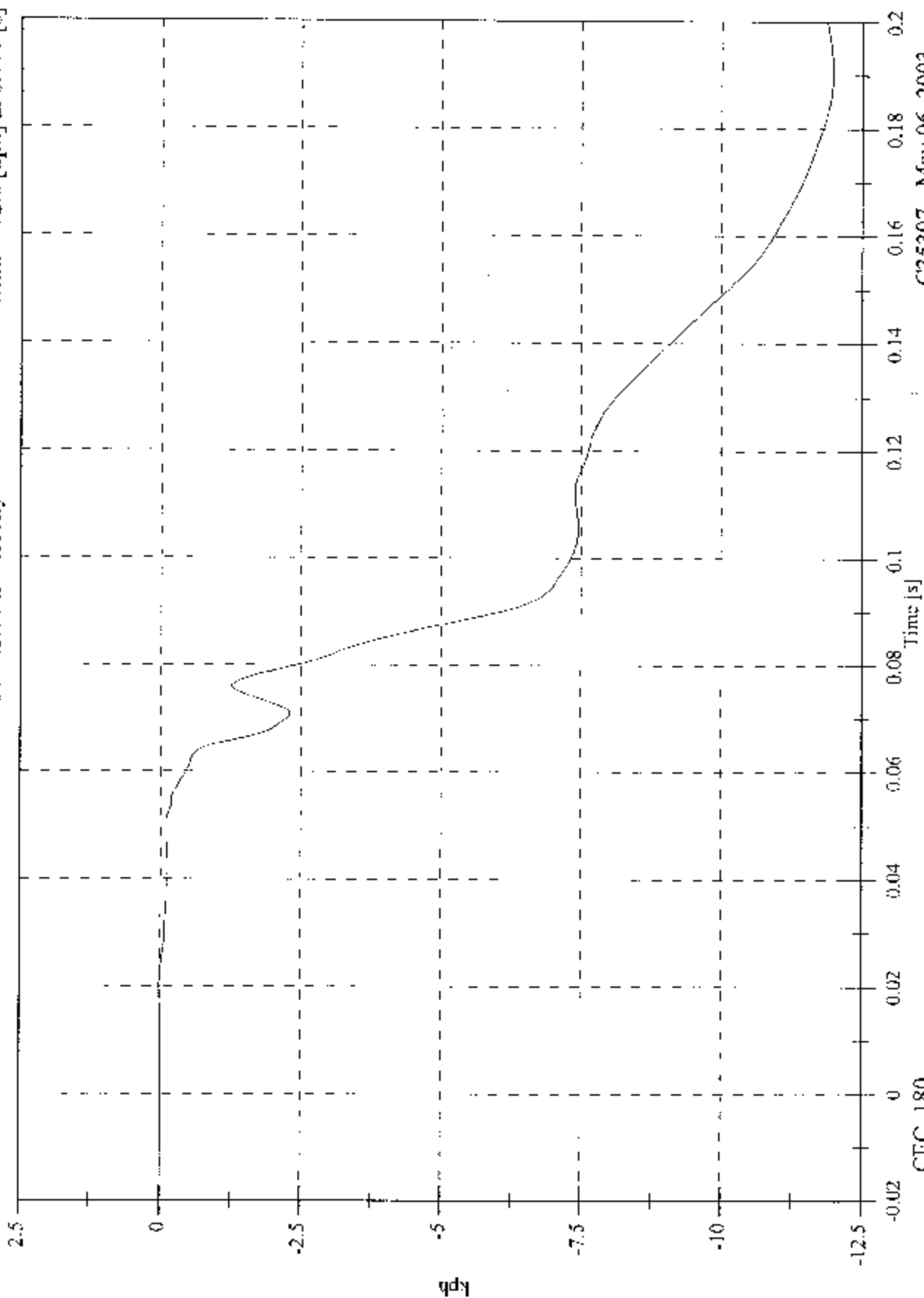


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.0 [kph] at 0.018 [s]
Min: -12.0 [kph] at 0.191 [s]

V2P4 Head x Velocity



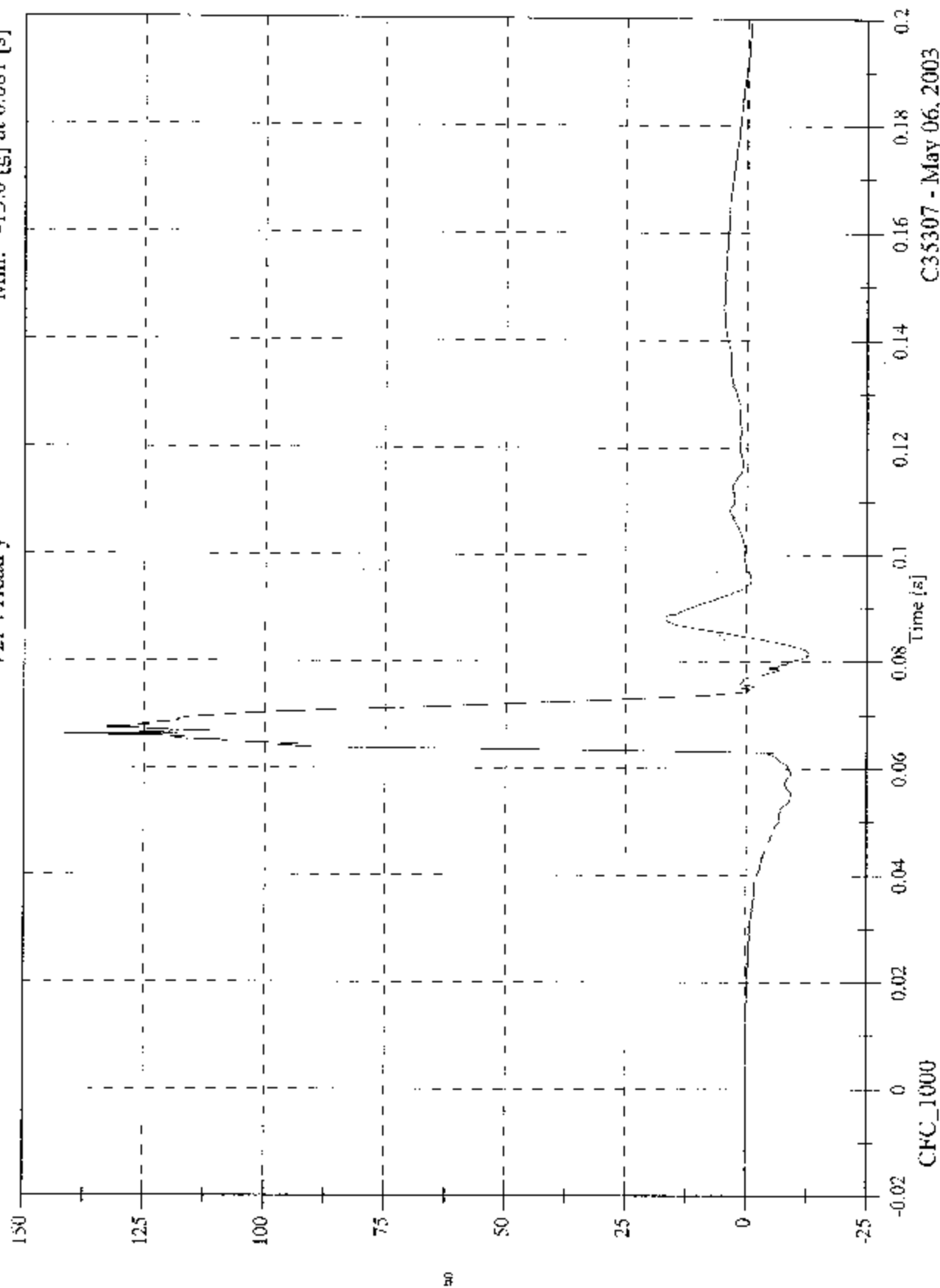
CFC_180

C35307 - May 06, 2003

2003 FNVSS 214D Test 8 2003 Honda Element

Max: 141.7 [g] at 0.066 [s]
Min: -13.0 [g] at 0.081 [s]

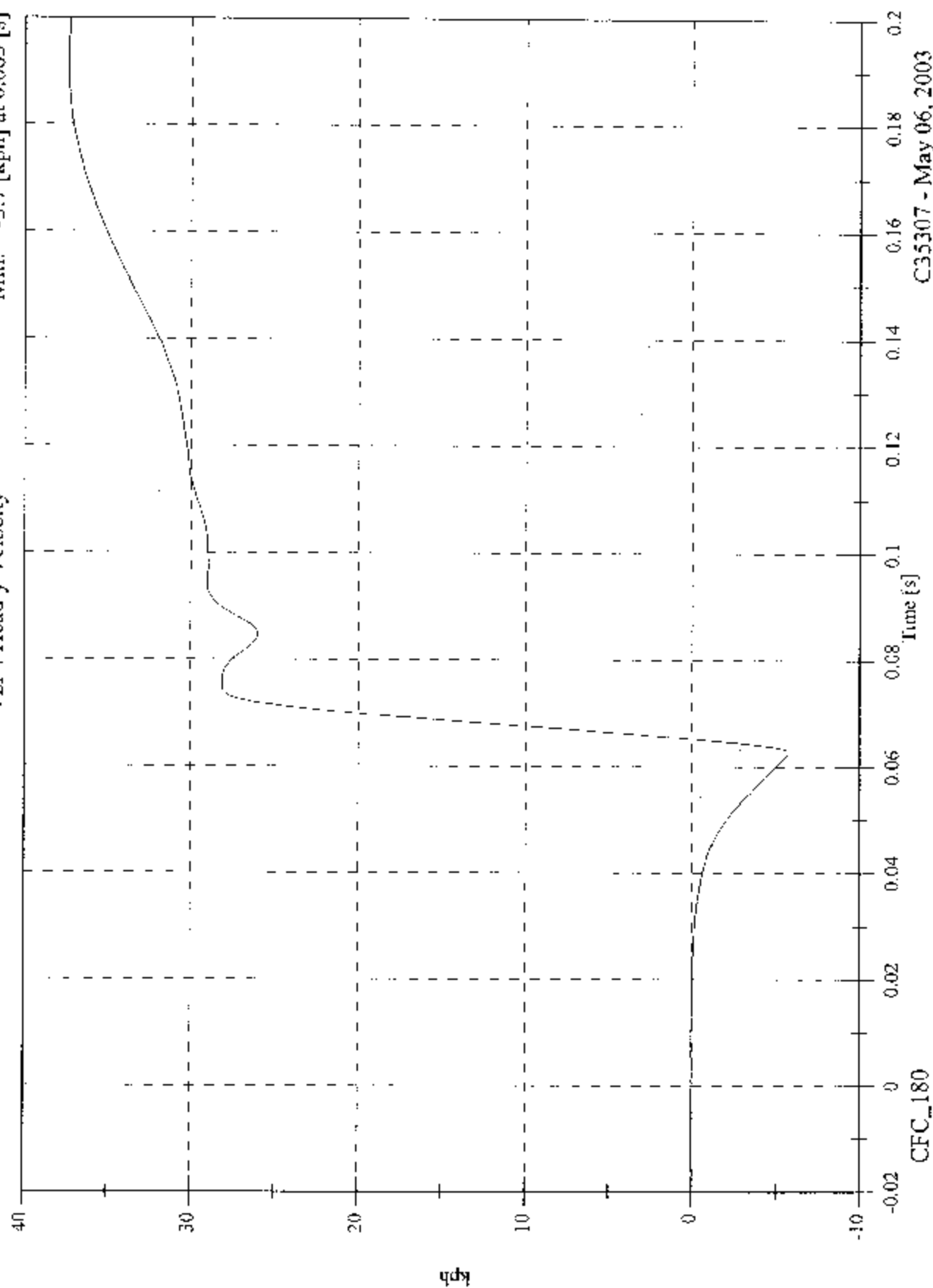
V2P4 Head y



C35307 - May 06, 2003

Max: 37.4 [kph] at 0.191 [s]
Min: -5.7 [kph] at 0.063 [s]

V2P4 Head y Velocity

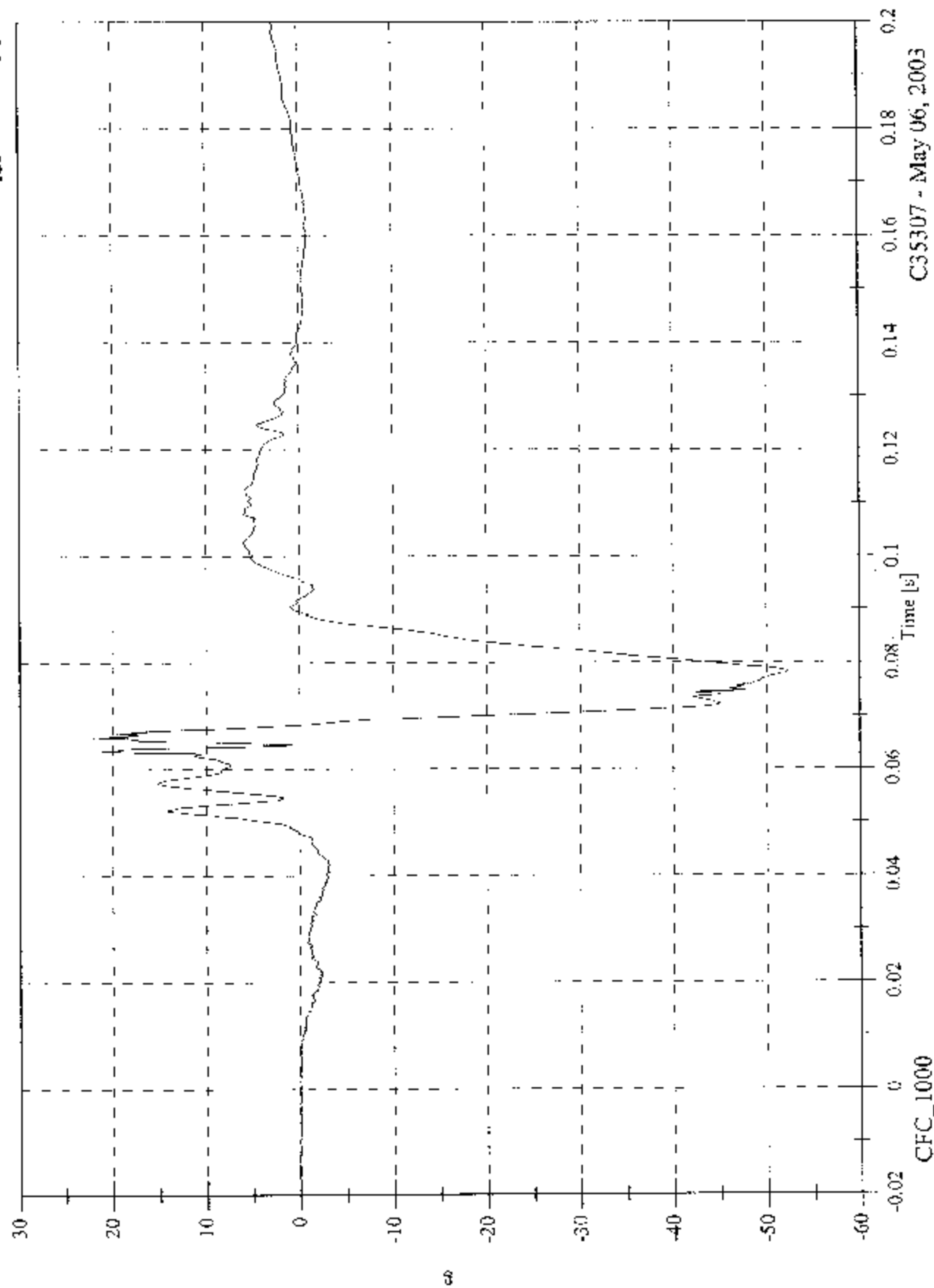


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 22.1 [g] at 0.066 [s]
Min: -52.4 [g] at 0.078 [s]

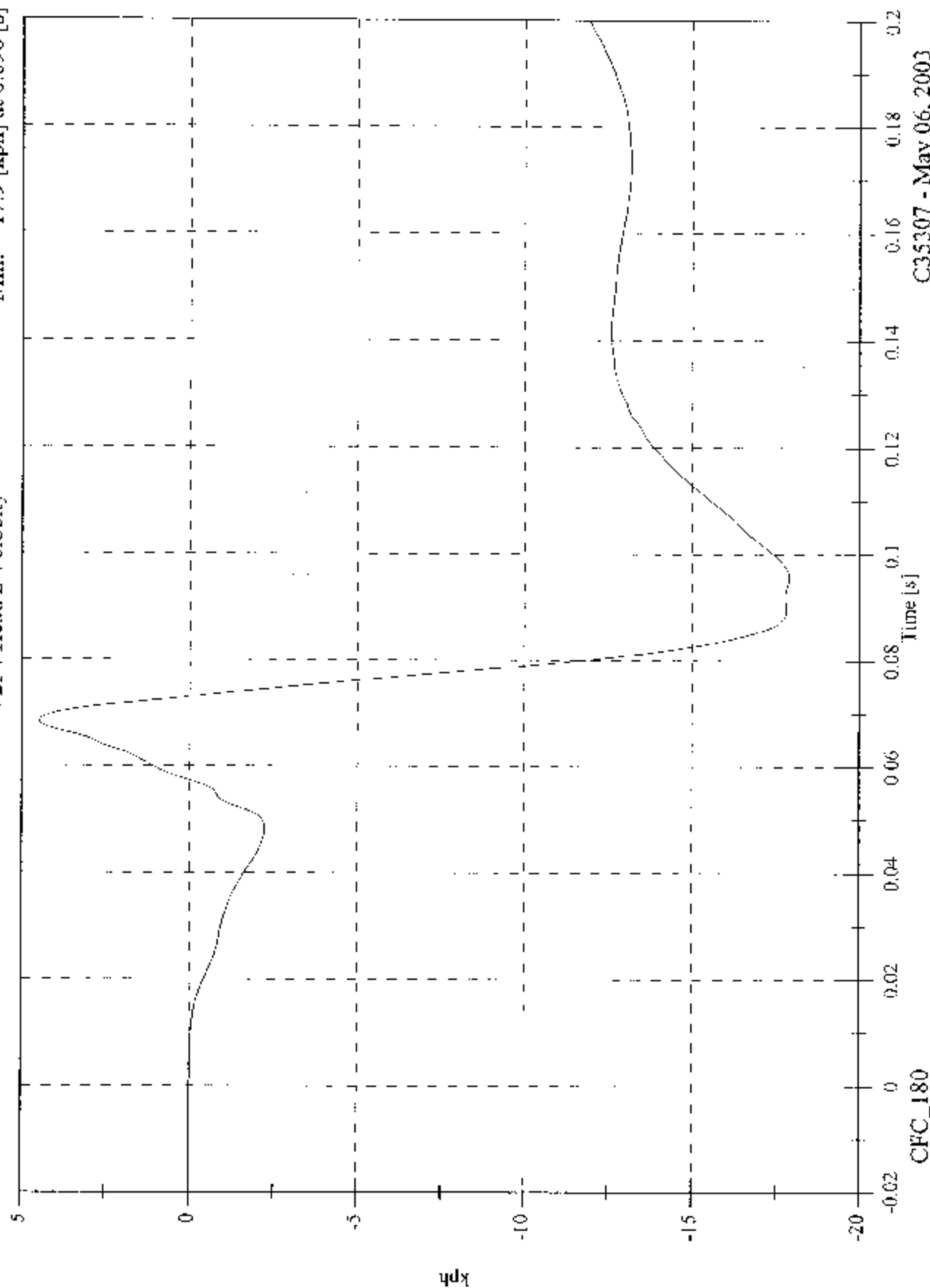
V2P4 Head z



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Max: 4.5 [kph] at 0.068 [s]
Min: -17.9 [kph] at 0.096 [s]

V2P4 Head z Velocity

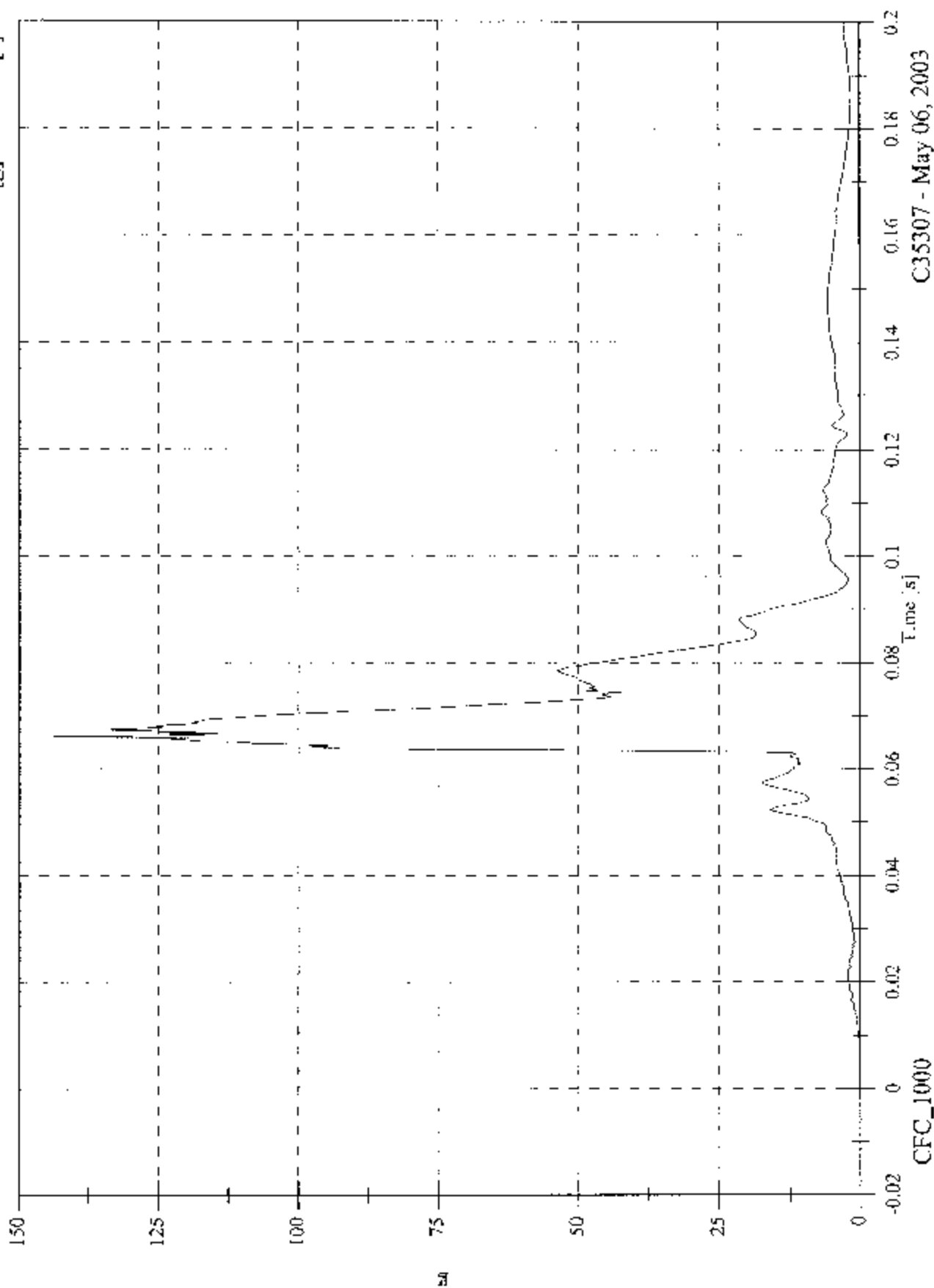


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 143.8 [g] at 0.066 [s]
Min: 0.0 [g] at -0.003 [s]

V2P4 Head Resultant

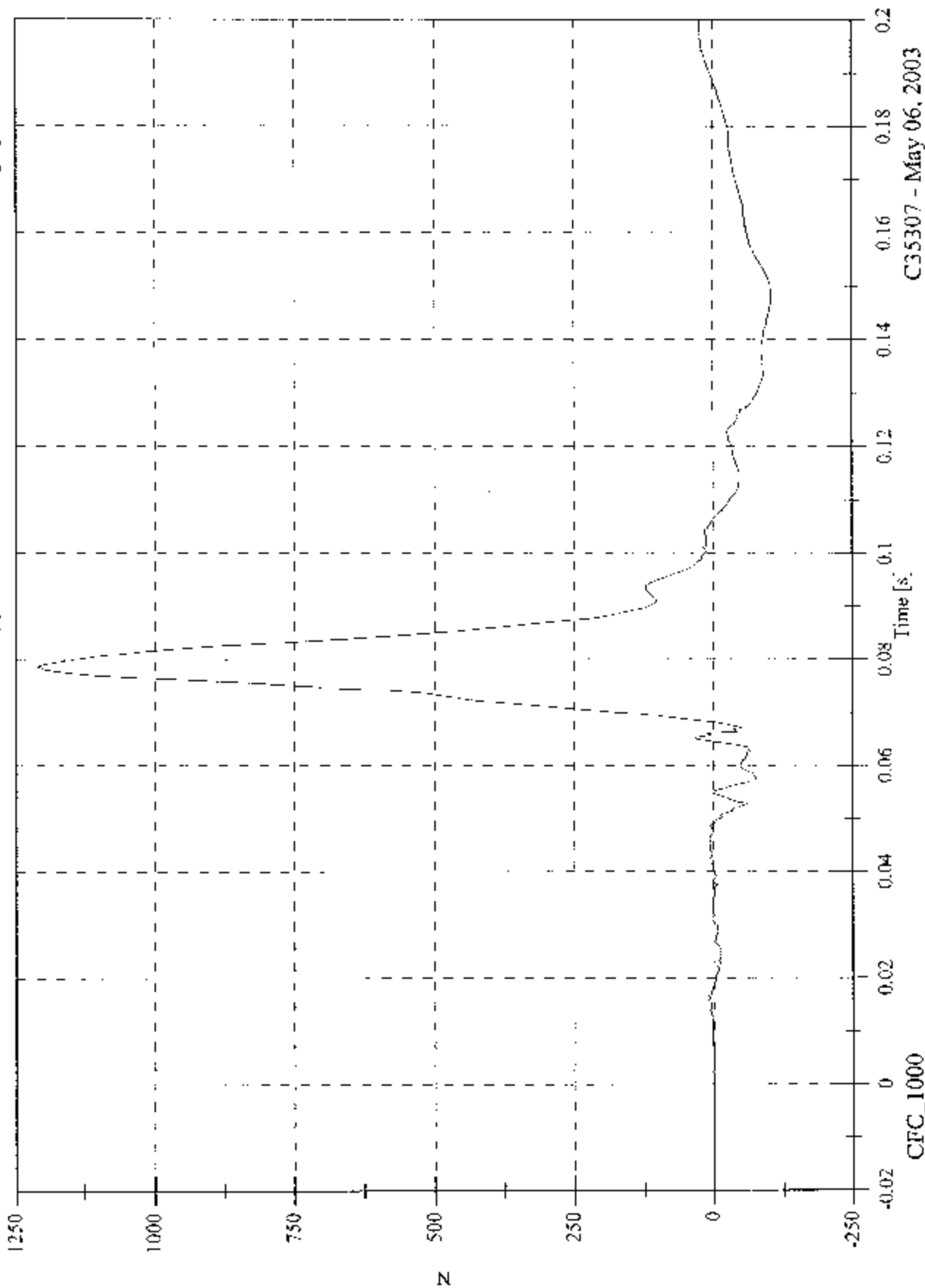


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 1211.3 [N] at 0.079 [s]
Min: -103.6 [N] at 0.148 [s]

V2P4 Upper Neck Fx

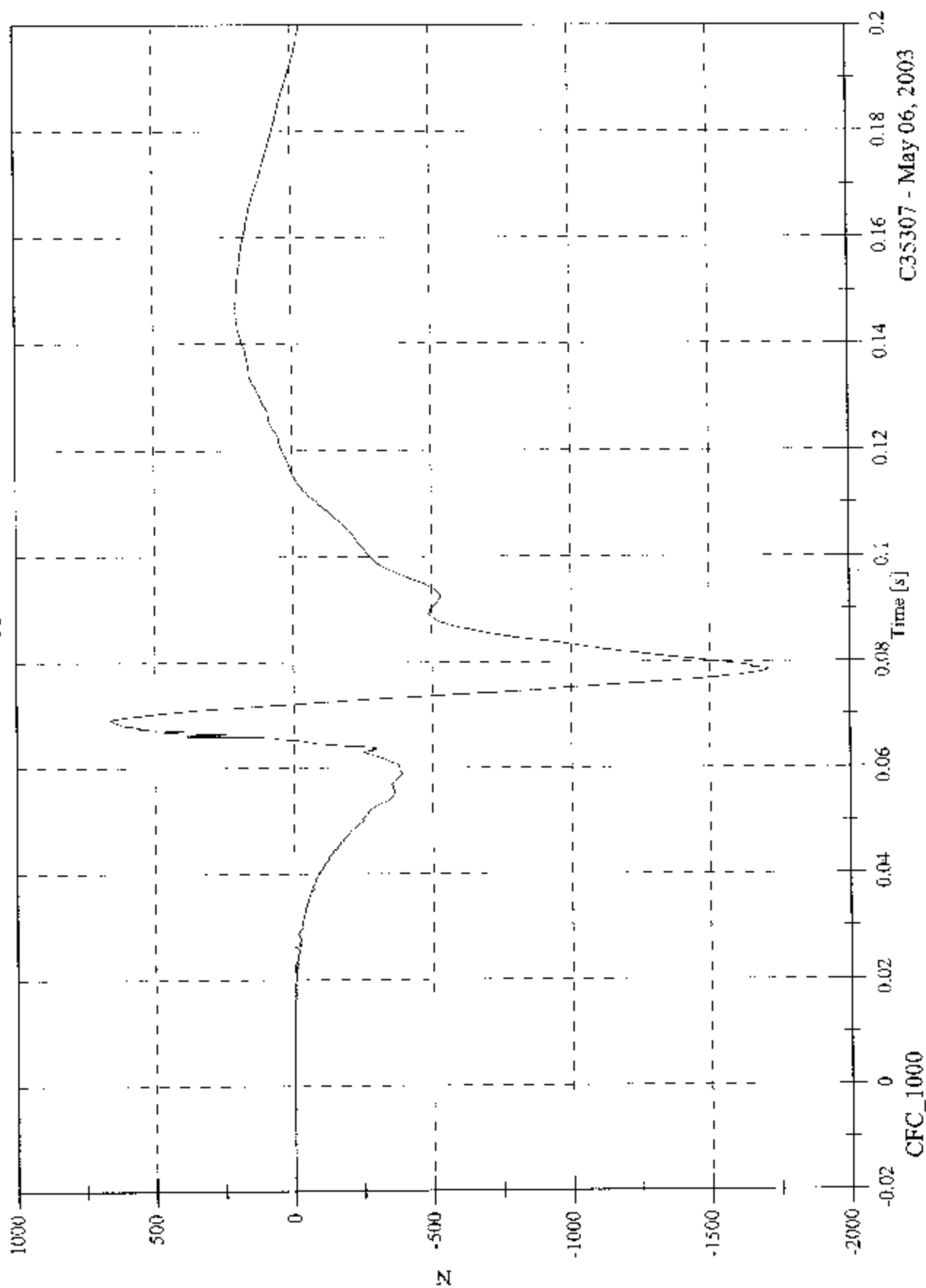


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 661.9 [N] at 0.069 [s]
Min: -1711.0 [N] at 0.078 [s]

V2P4 Upper Neck Fy



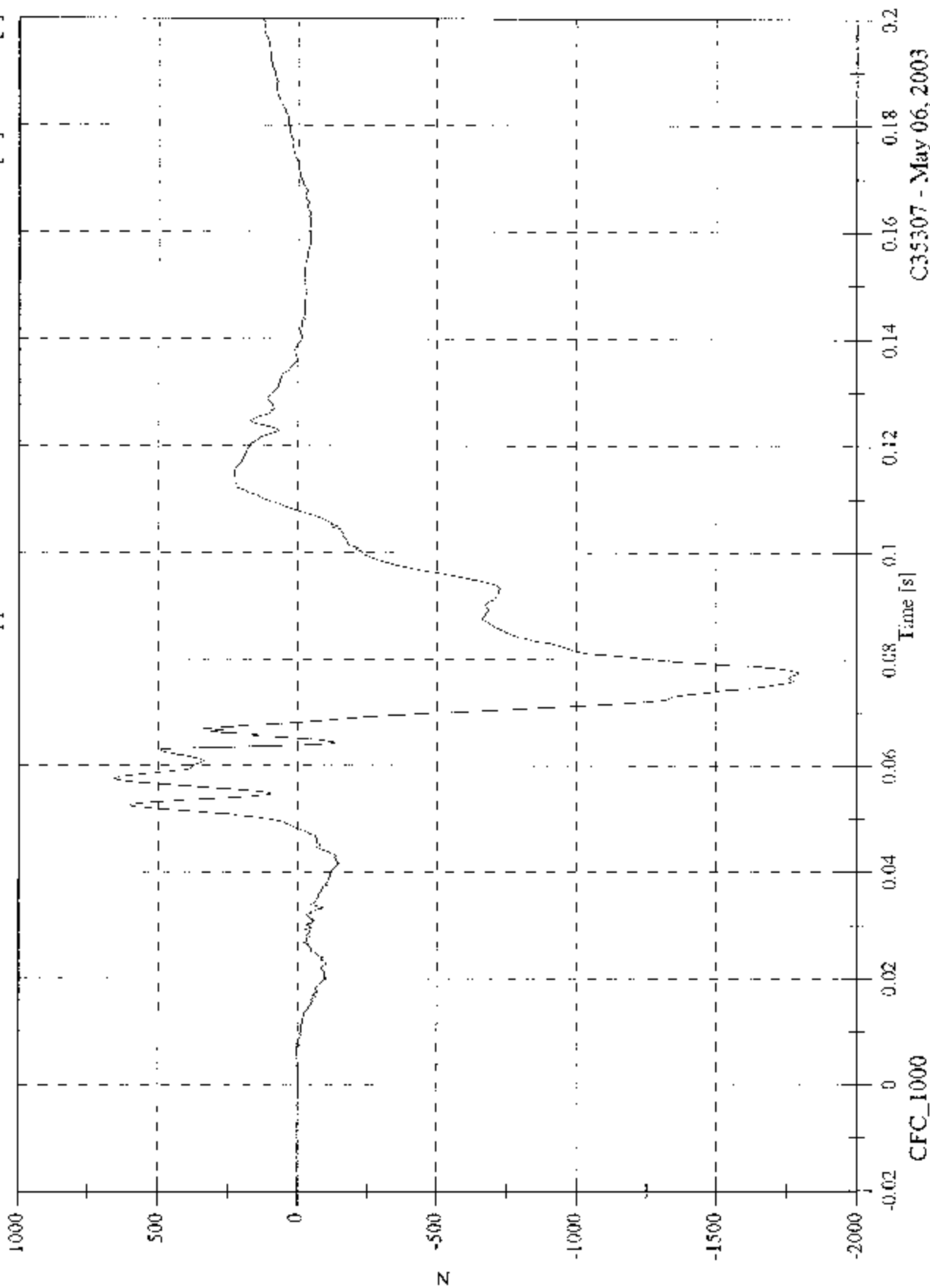
C3S307 - May 06, 2003

2003 FM/VSS 214D Test 8 2003 Honda Element

Max: 659.4 [N] at 0.057 [s]

V2P4 Upper Neck Fz

Min: -1794.5 [N] at 0.077 [s]

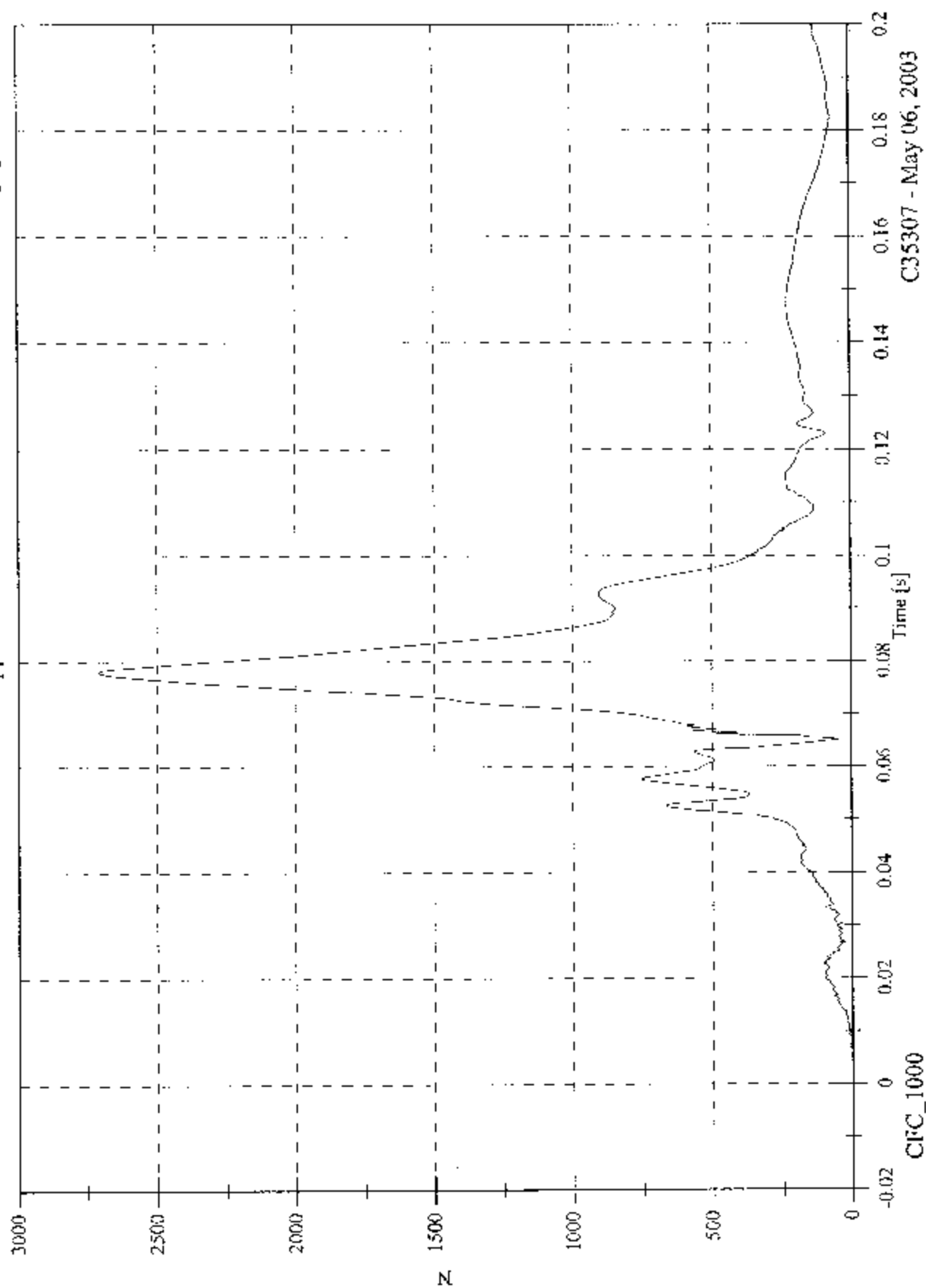


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Neck F Resultant

Max: 2709.9 [N] at 0.078 [s]
Min: 0.1 [N] at -0.003 [s]

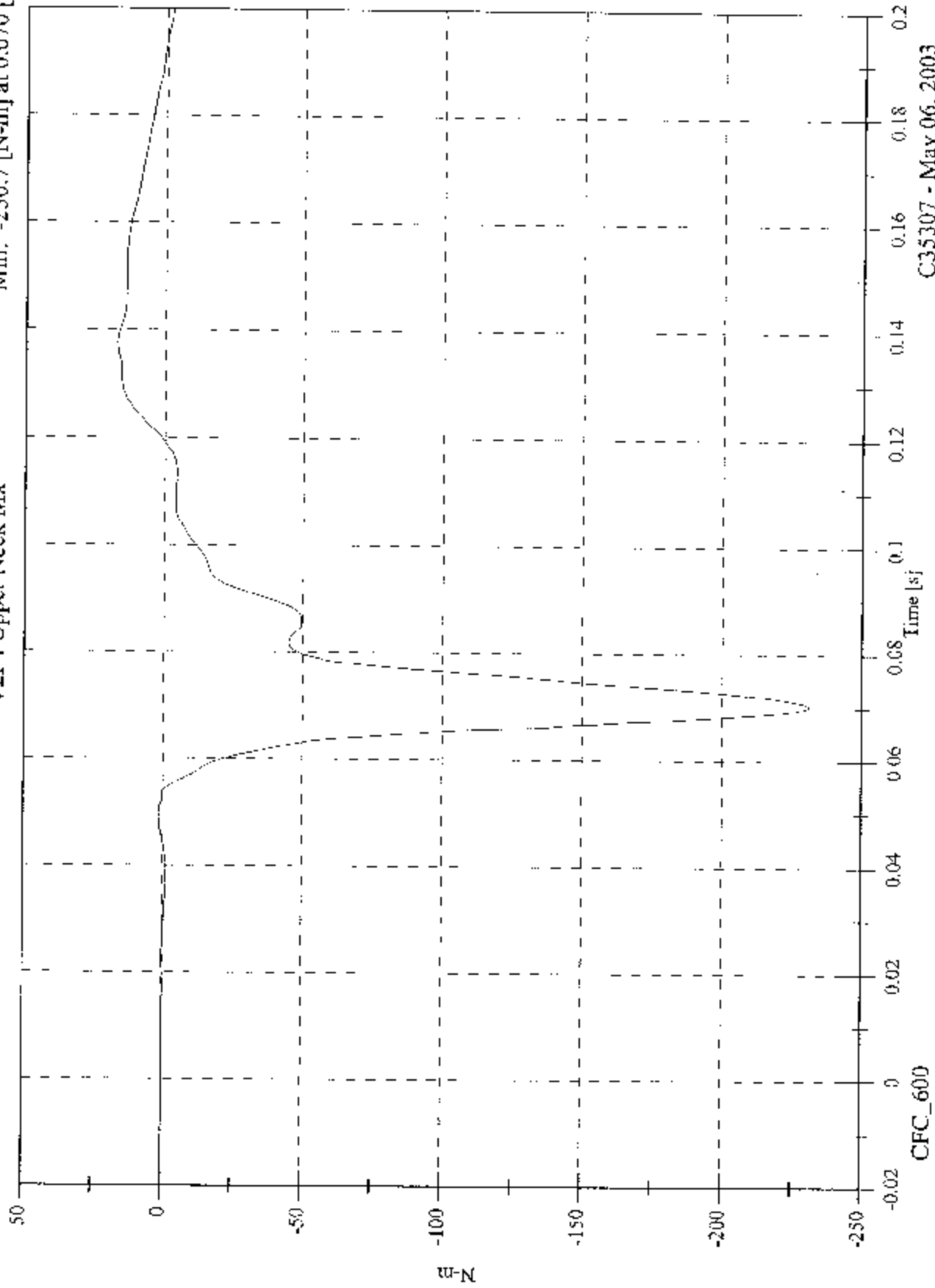


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 17.2 [N-m] at 0.137 [s]
Min: -230.7 [N-m] at 0.070 [s]

V2P4 Upper Neck Mx

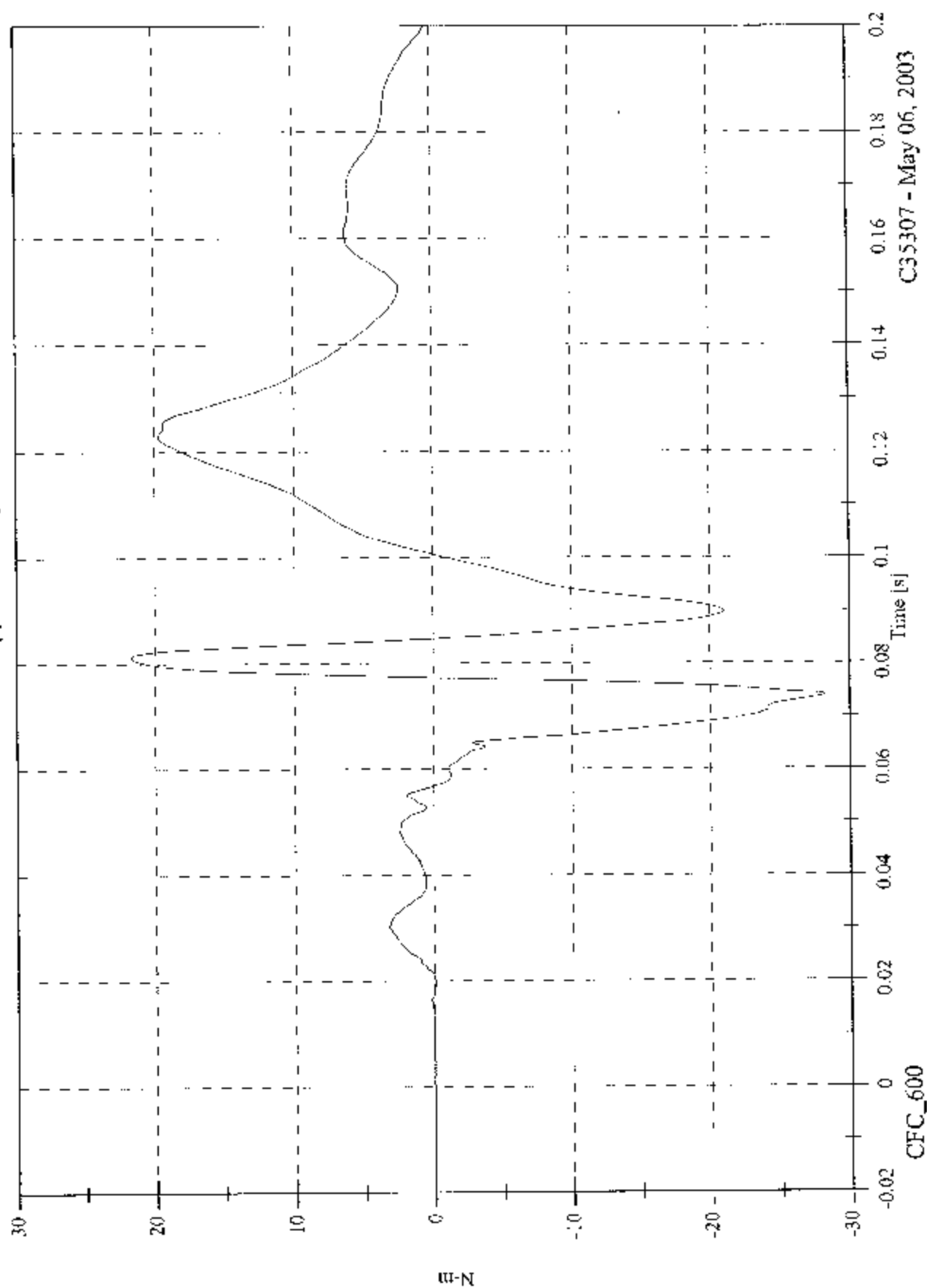


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Neck My

Max: 21.7 [N-m] at 0.081 [s]
Min: -28.2 [N-m] at 0.074 [s]

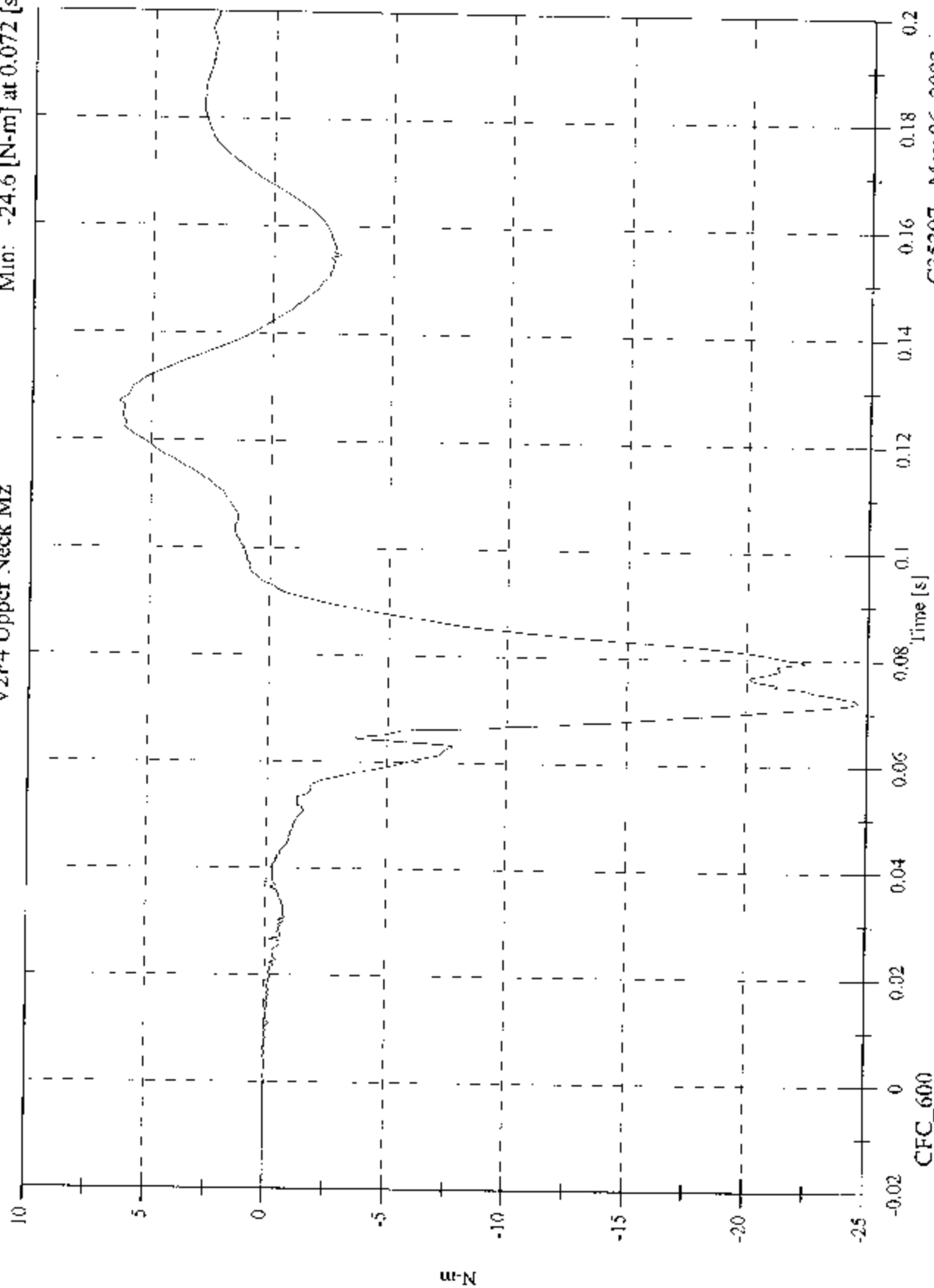


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

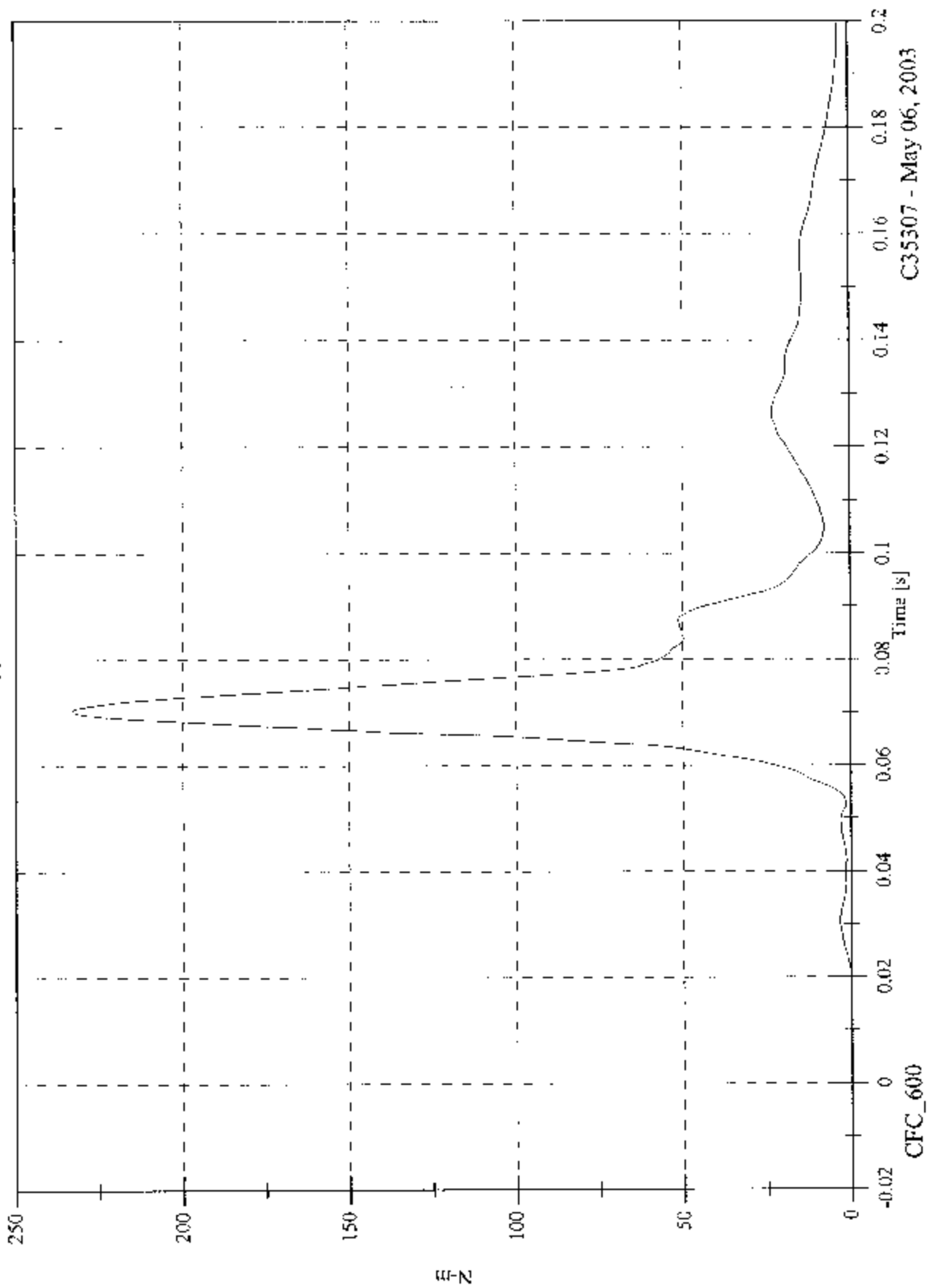
V2P4 Upper Neck Mz

Max: 6.3 [N-m] at 0.127 [s]
Min: -24.6 [N-m] at 0.072 [s]



C35307 - May 06, 2003

V2P4 Upper Neck M Resultant

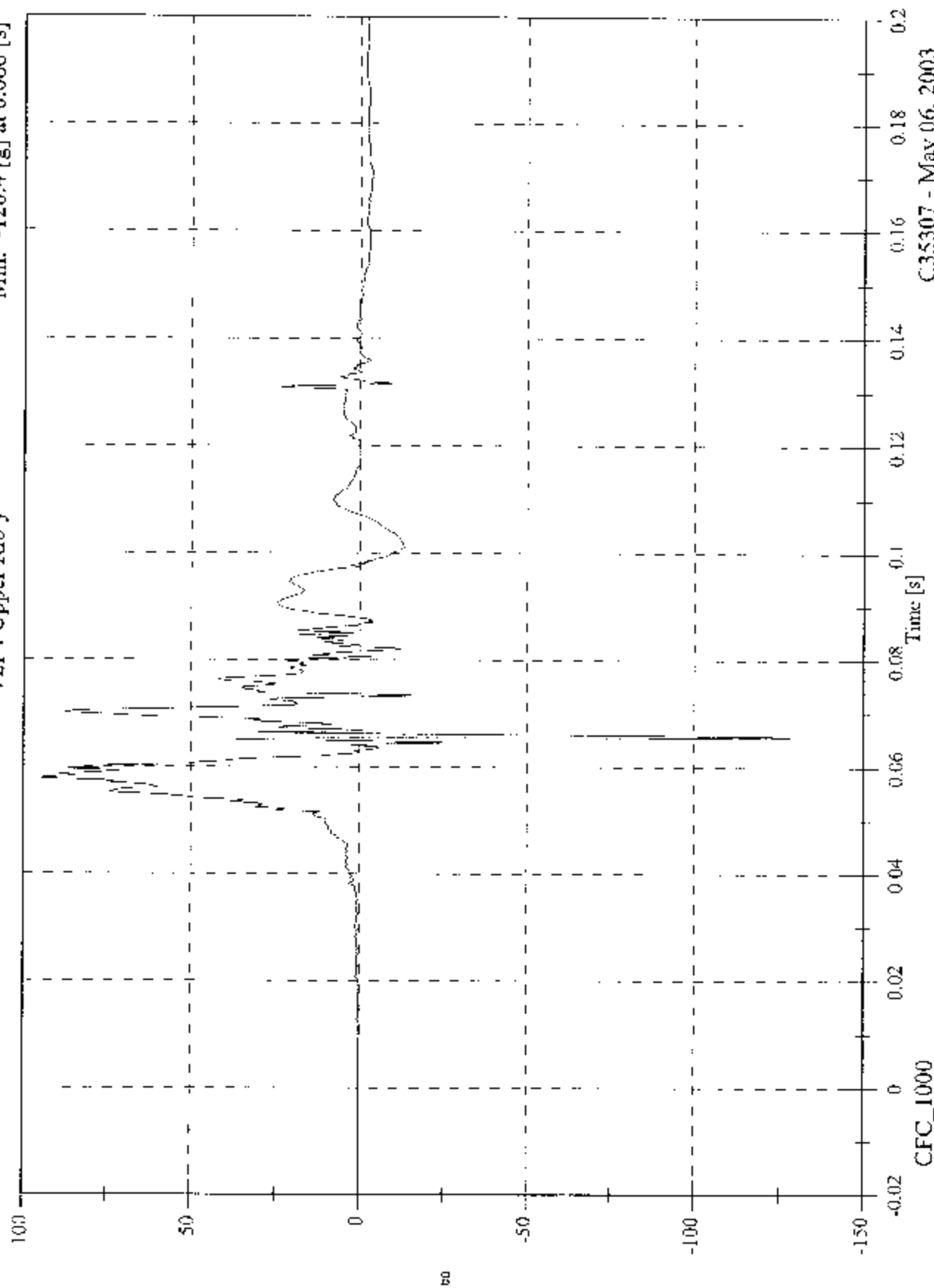


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 95.7 [g] at 0.058 [s]
Min: -128.4 [g] at 0.066 [s]

V2P4 Upper Rib y

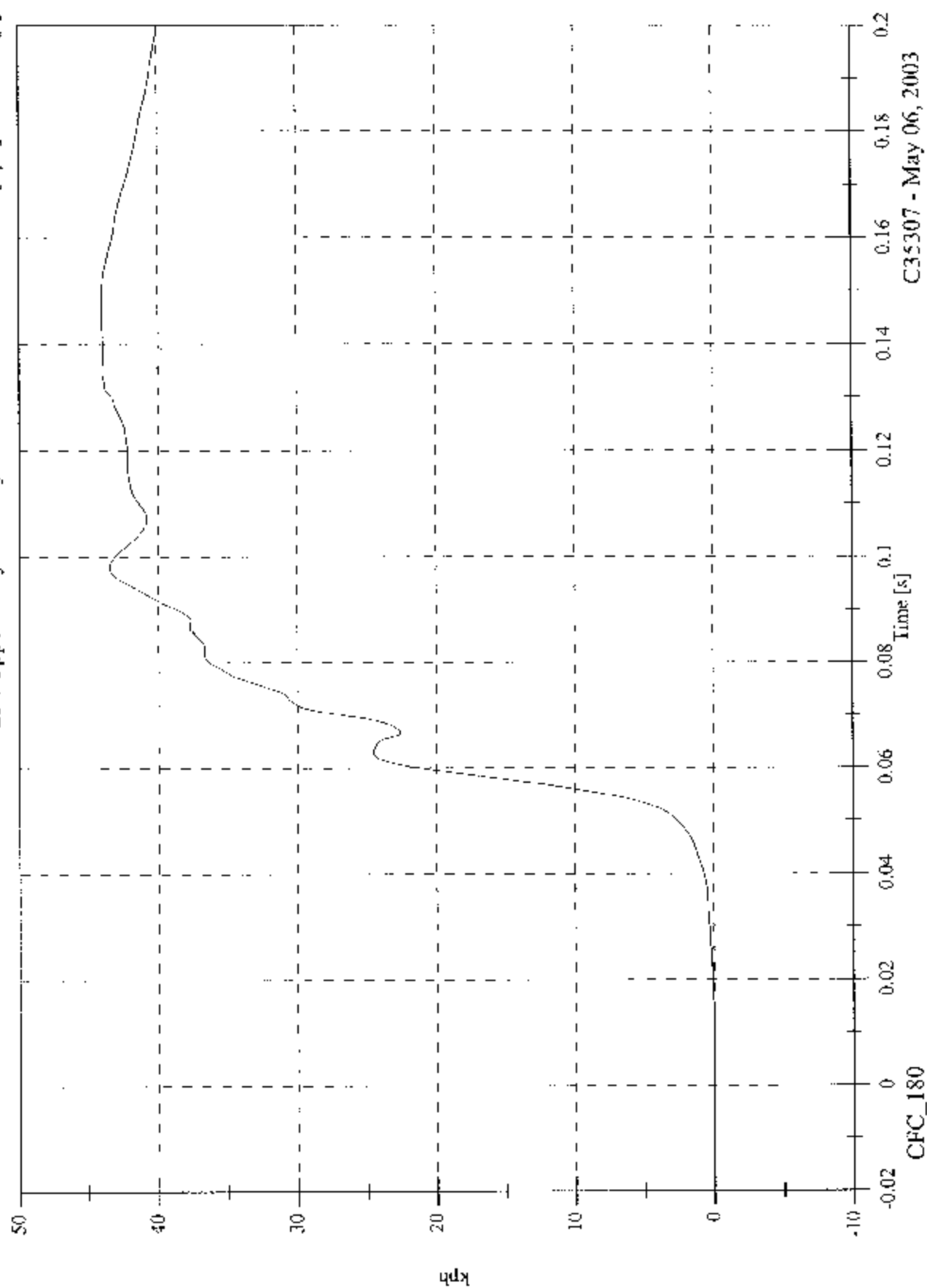


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 44.0 [kph] at 0.147 [s]
Min: -0.0 [kph] at -0.016 [s]

V2P4 Upper Rib y Velocity



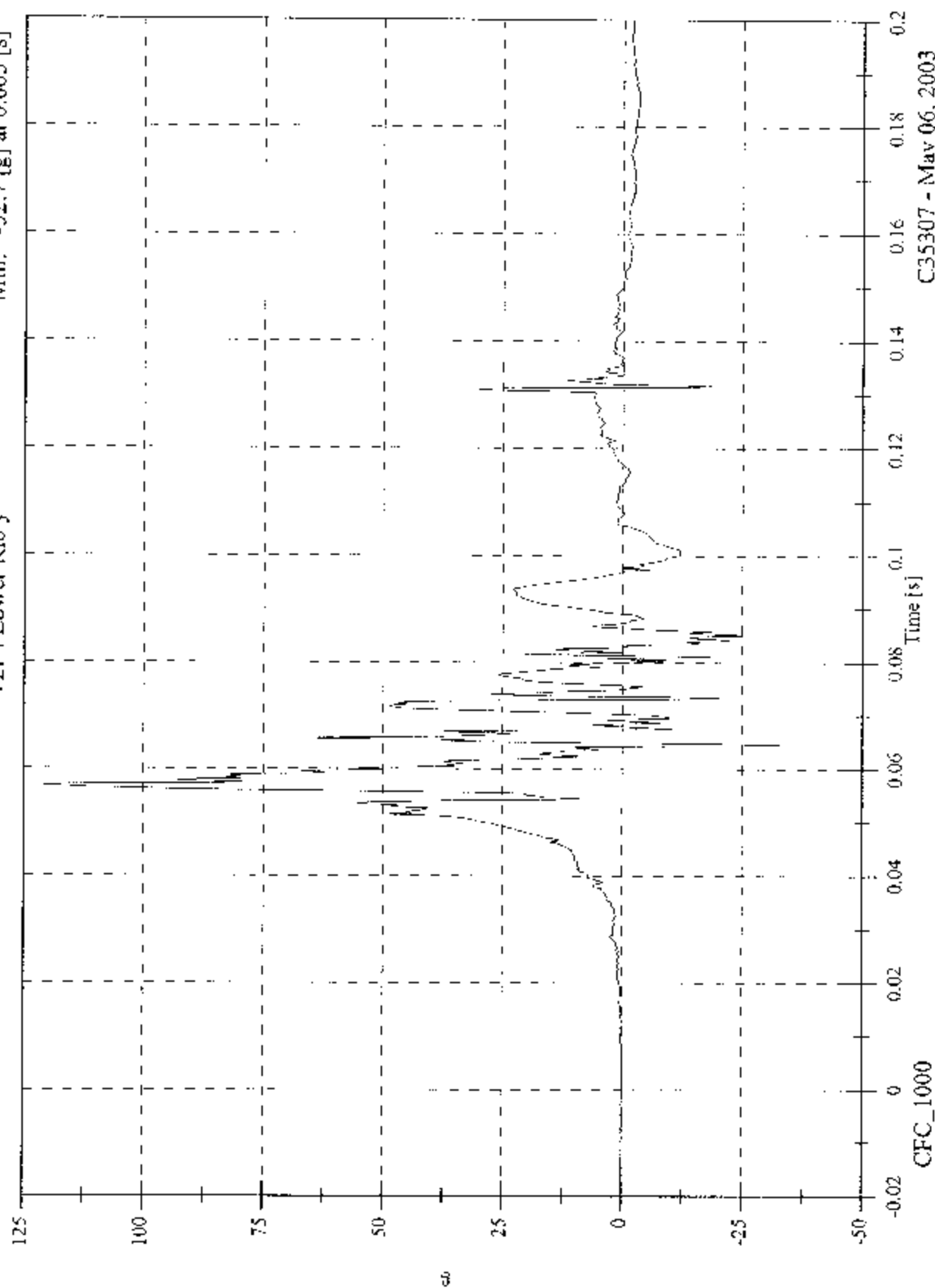
CFC_180

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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 120.7 [g] at 0.057 [s]
Min: -32.7 [g] at 0.065 [s]

V2P4 Lower Rib y

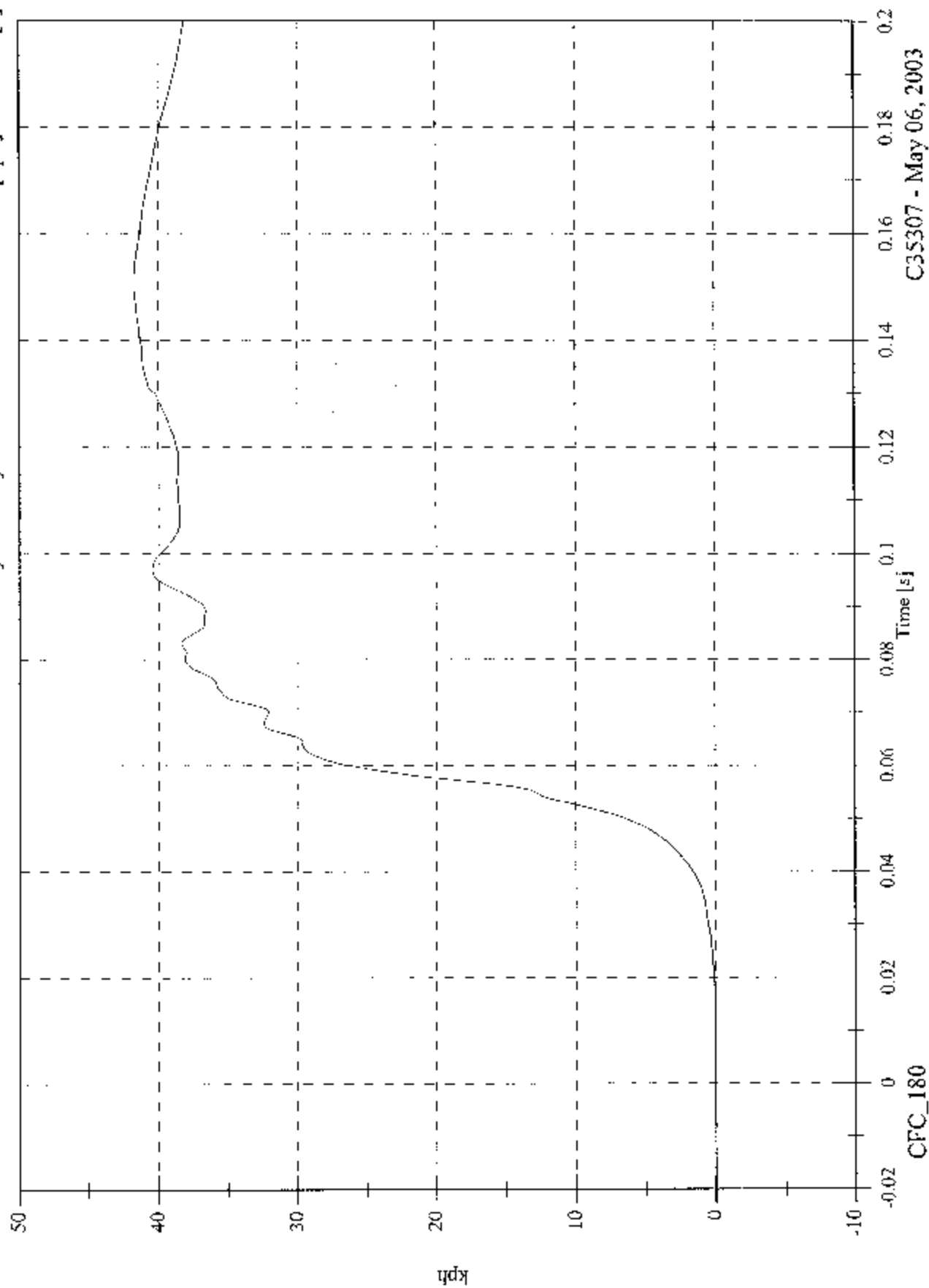


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 41.7 [kph] at 0.151 [s]
 Min: -0.0 [kph] at -0.015 [s]

V2P4 Lower Rib y Velocity

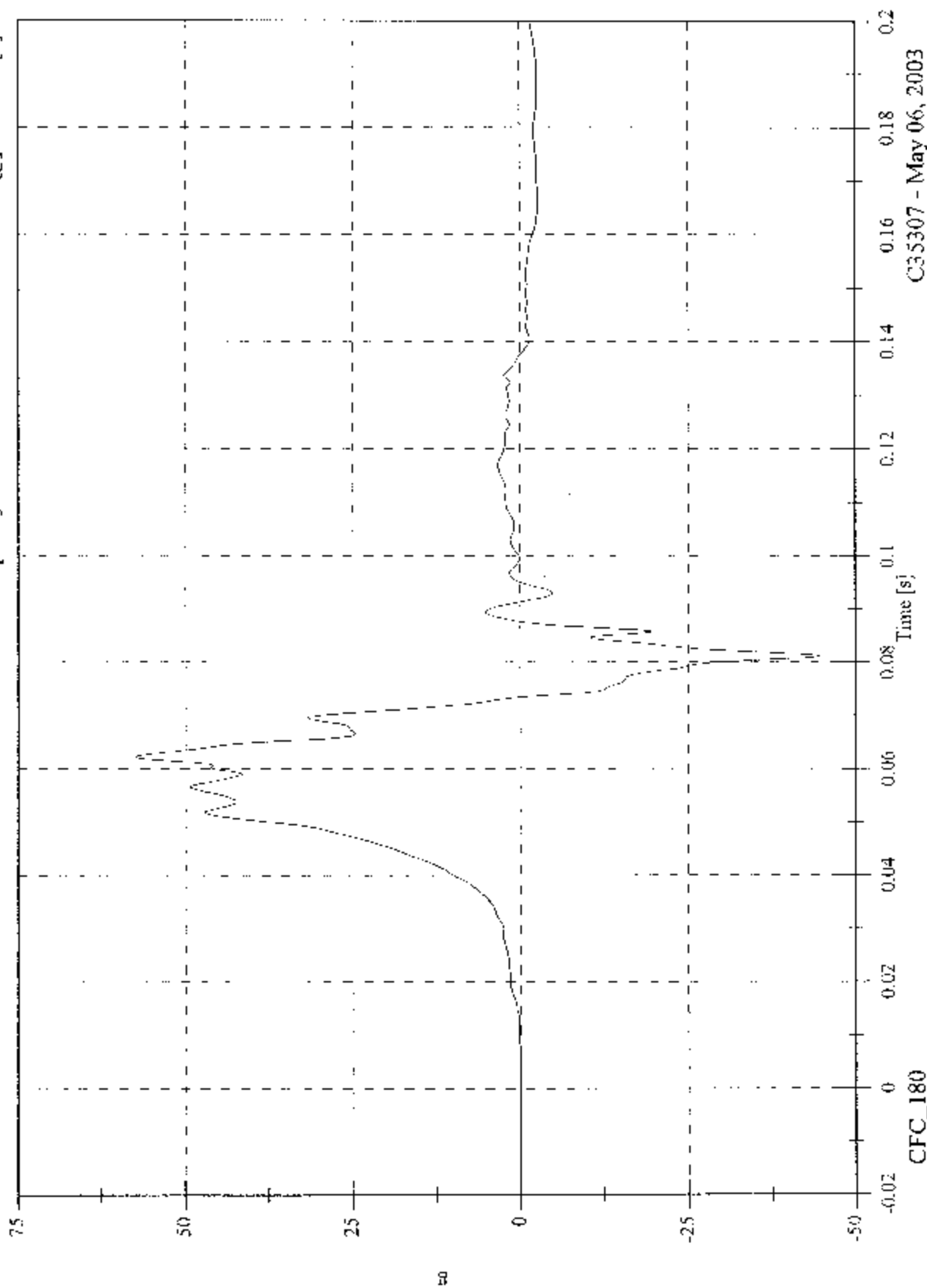


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2003 FNVSS 214D Test 8 2003 Honda Element

Max: 57.4 [g] at 0.062 [s]
Min: -44.6 [g] at 0.081 [s]

V2P4 Lower Spine y

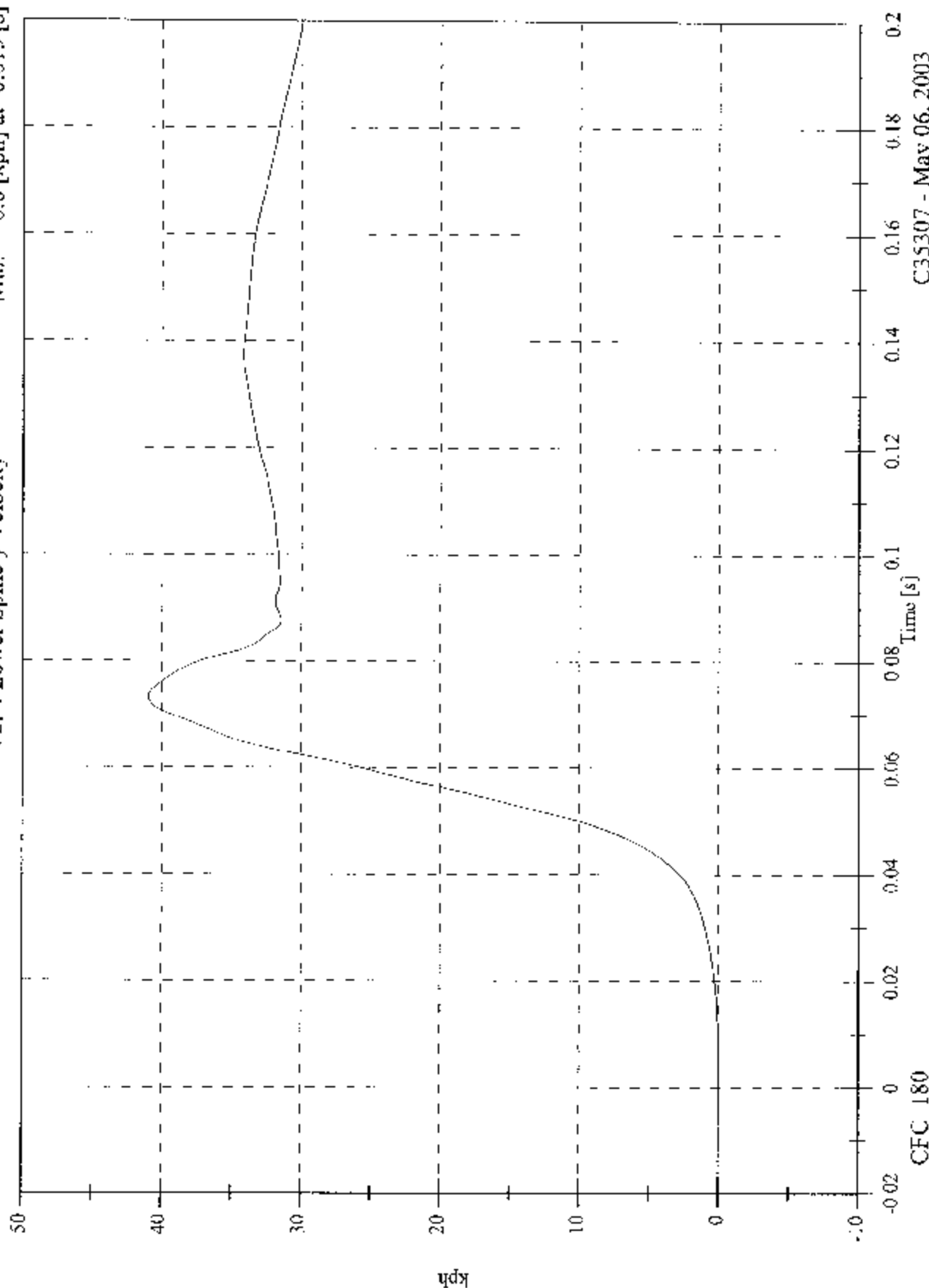


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Lower Spine y Velocity

Max: 41.0 [kph] at 0.073 [s]
Min: -0.0 [kph] at -0.015 [s]



CFC_180

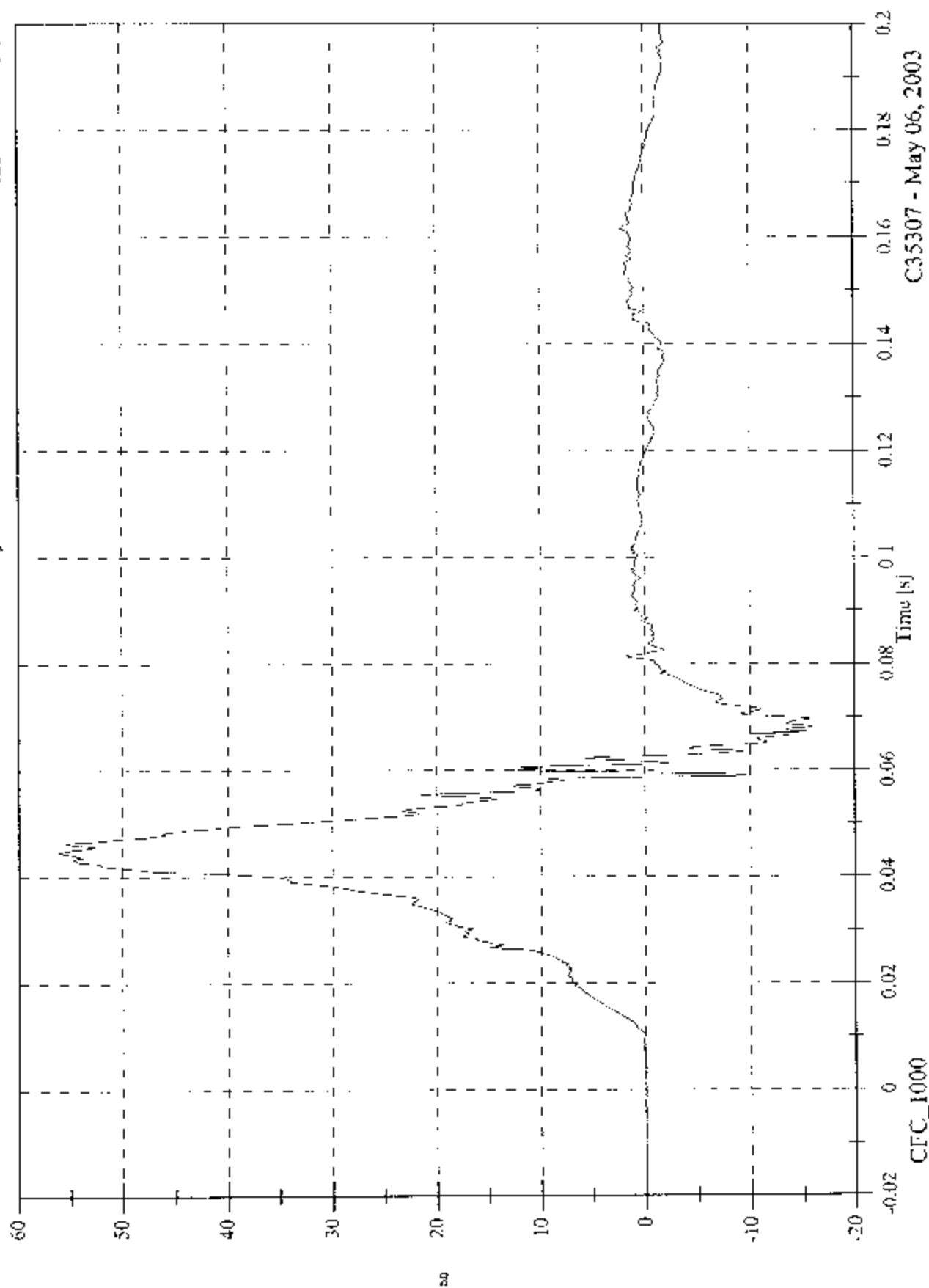
C35307 - May 06, 2003

2003 FMI VSS 214D Test 8 2003 Honda Element

Max: 56.1 [g] at 0.045 [s]

Min: -16.0 [g] at 0.068 [s]

V2P4 Pelvic y

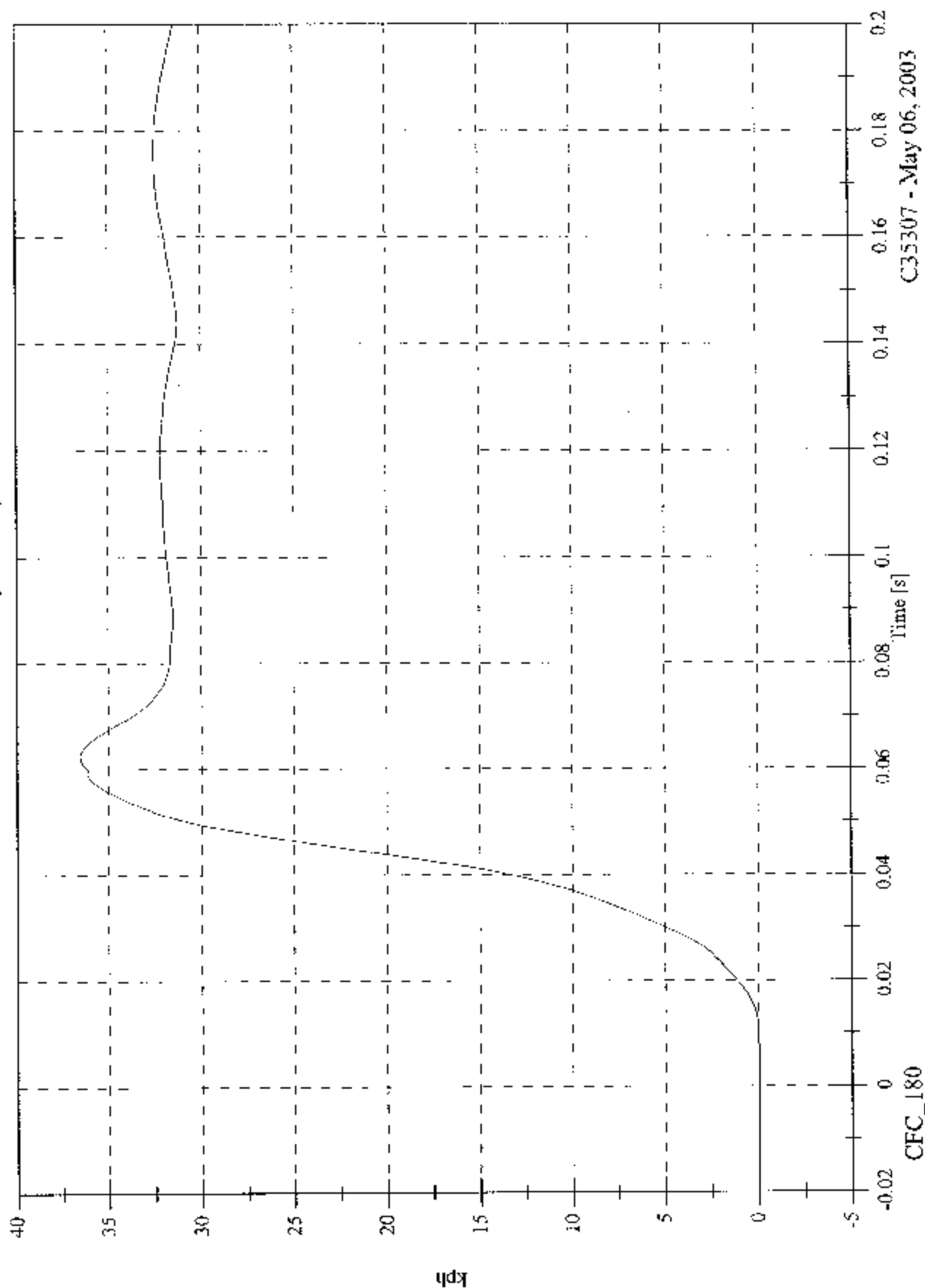


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Pelvic y Velocity

Max: 36.6 [kph] at 0.062 [s]
Min: -0.0 [kph] at -0.020 [s]

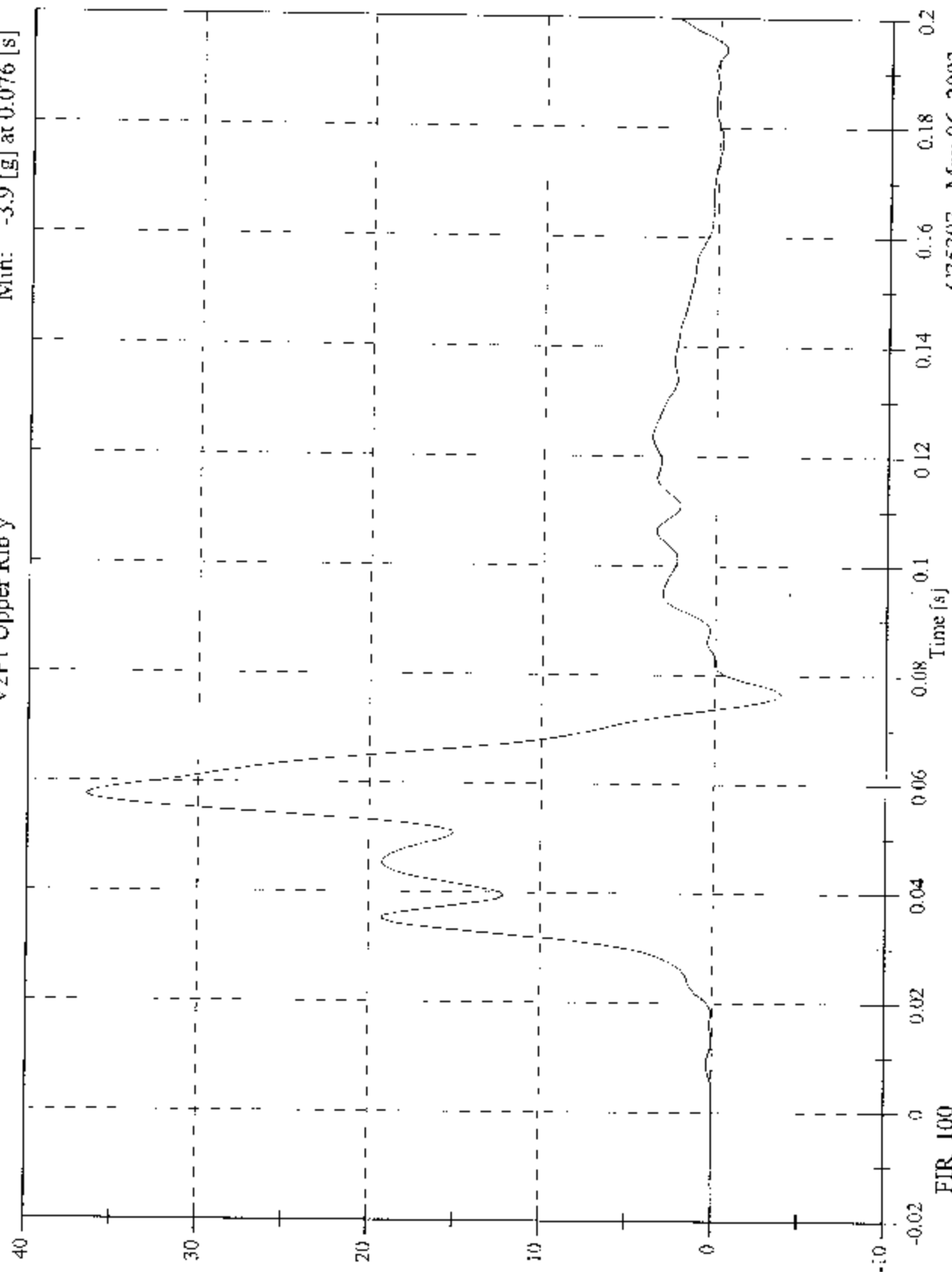


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 36.7 [g] at 0.057 [s]
Min: -3.9 [g] at 0.076 [s]

V2P1 Upper Rib y

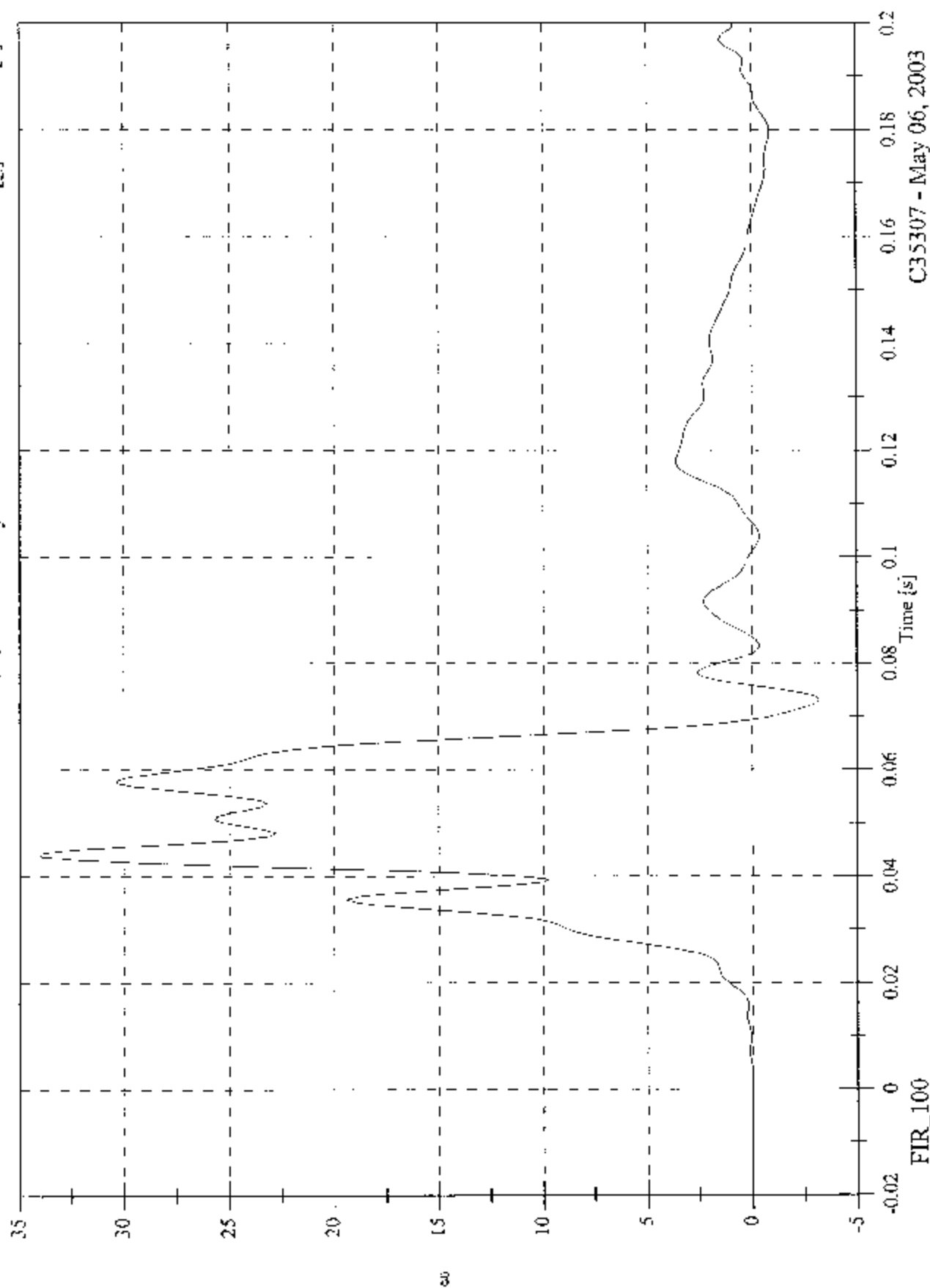


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 34.0 [g] at 0.044 [s]
Min: -3.2 [g] at 0.073 [s]

V2P1 Lower Rib y

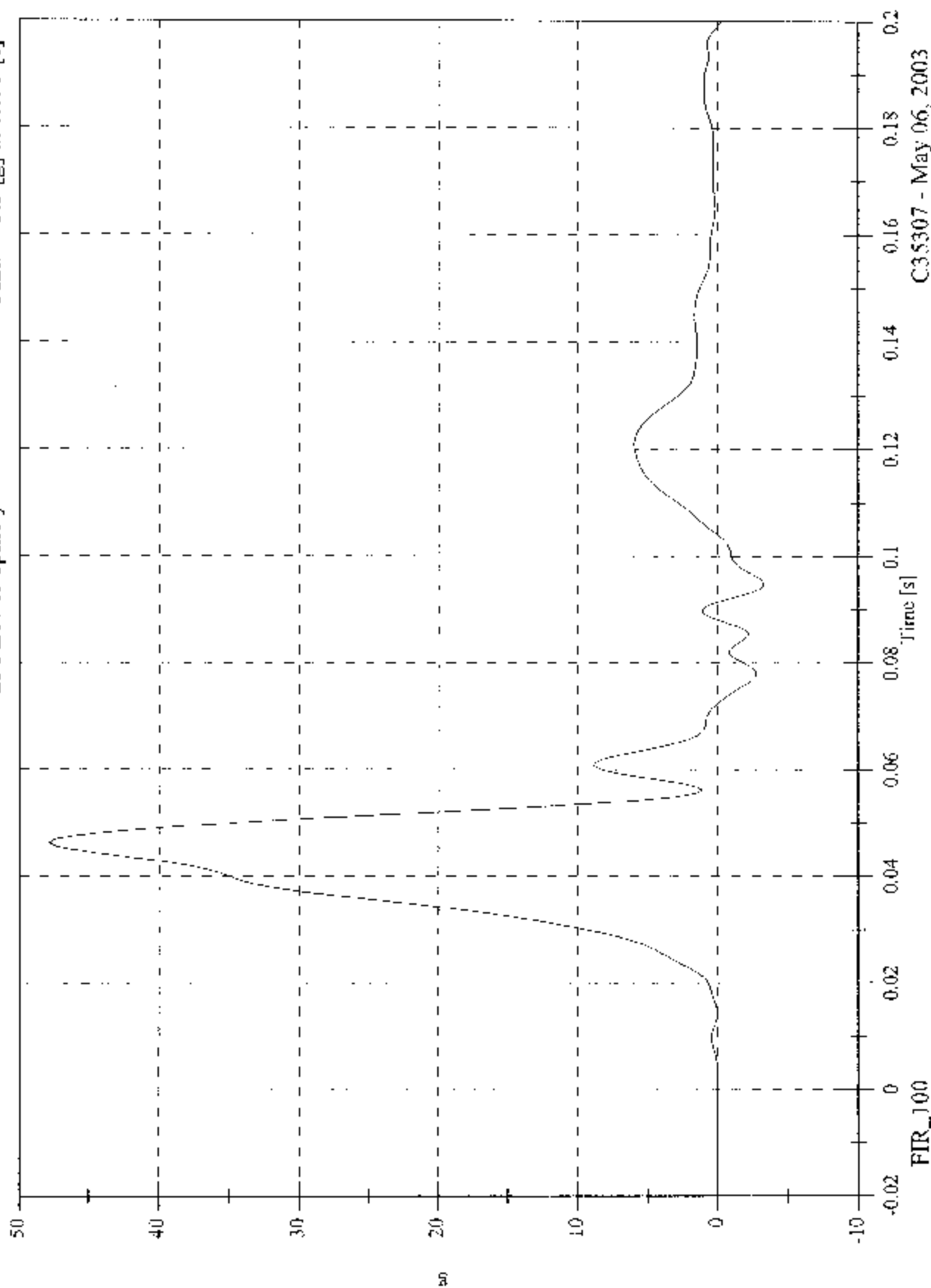


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Spine y

Max: 47.8 [g] at 0.046 [s]
Min: -3.3 [g] at 0.095 [s]



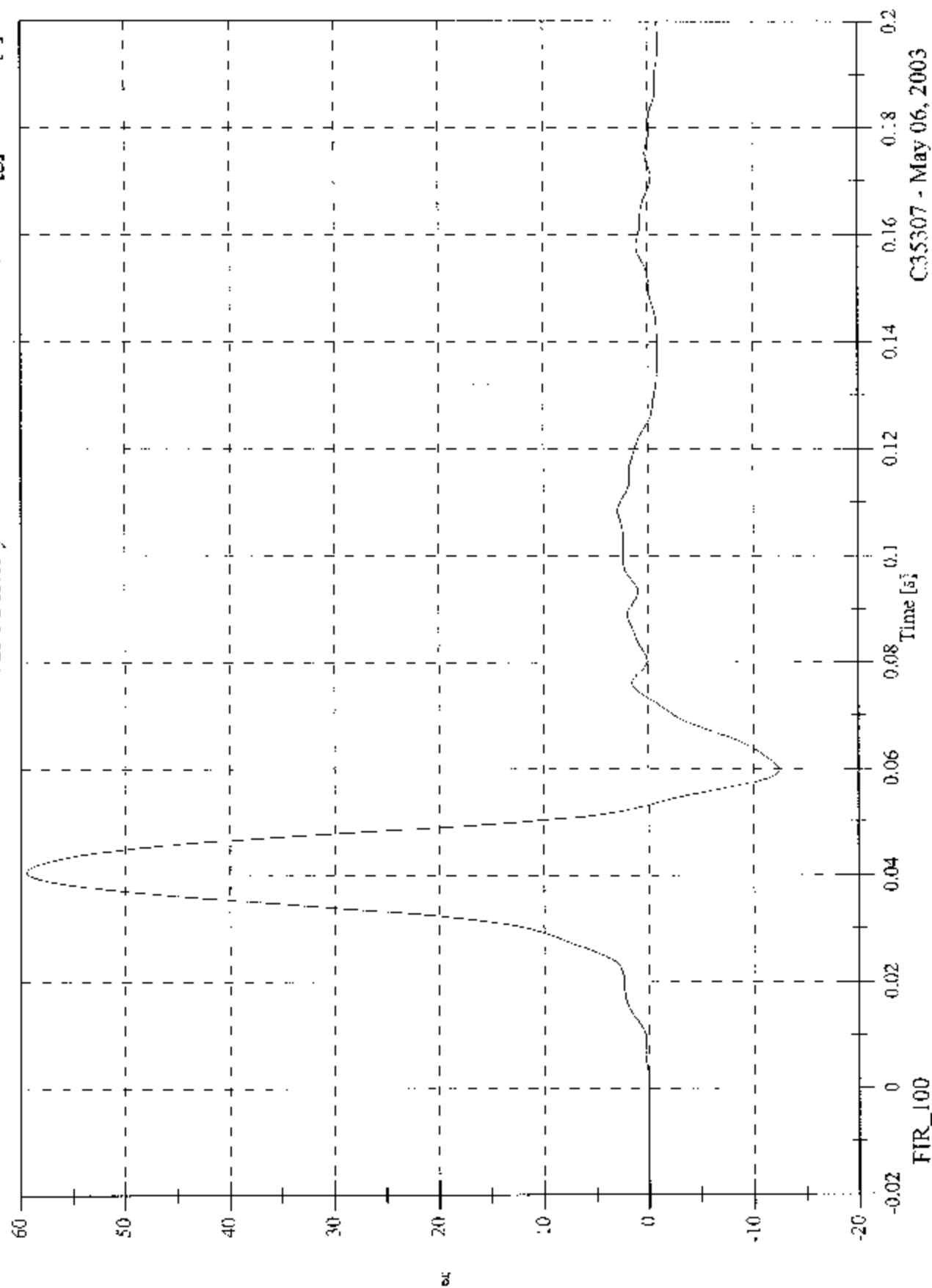
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 59.4 [g] at 0.041 [s]

Min: -12.4 [g] at 0.060 [s]

V2P1 Pelvic y

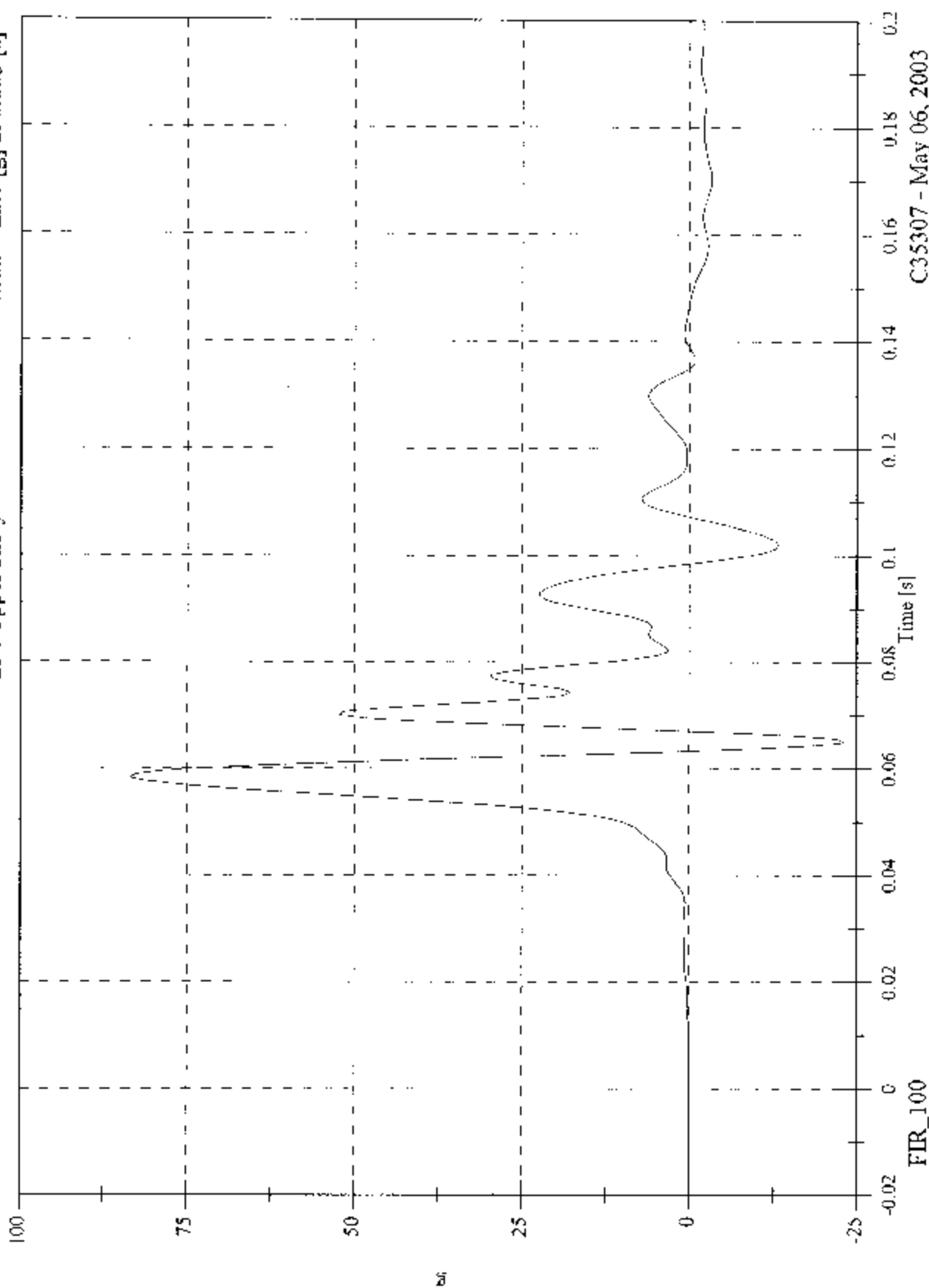


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 83.3 [g] at 0.058 [s]
Min: -23.1 [g] at 0.065 [s]

V2P4 Upper Rib y

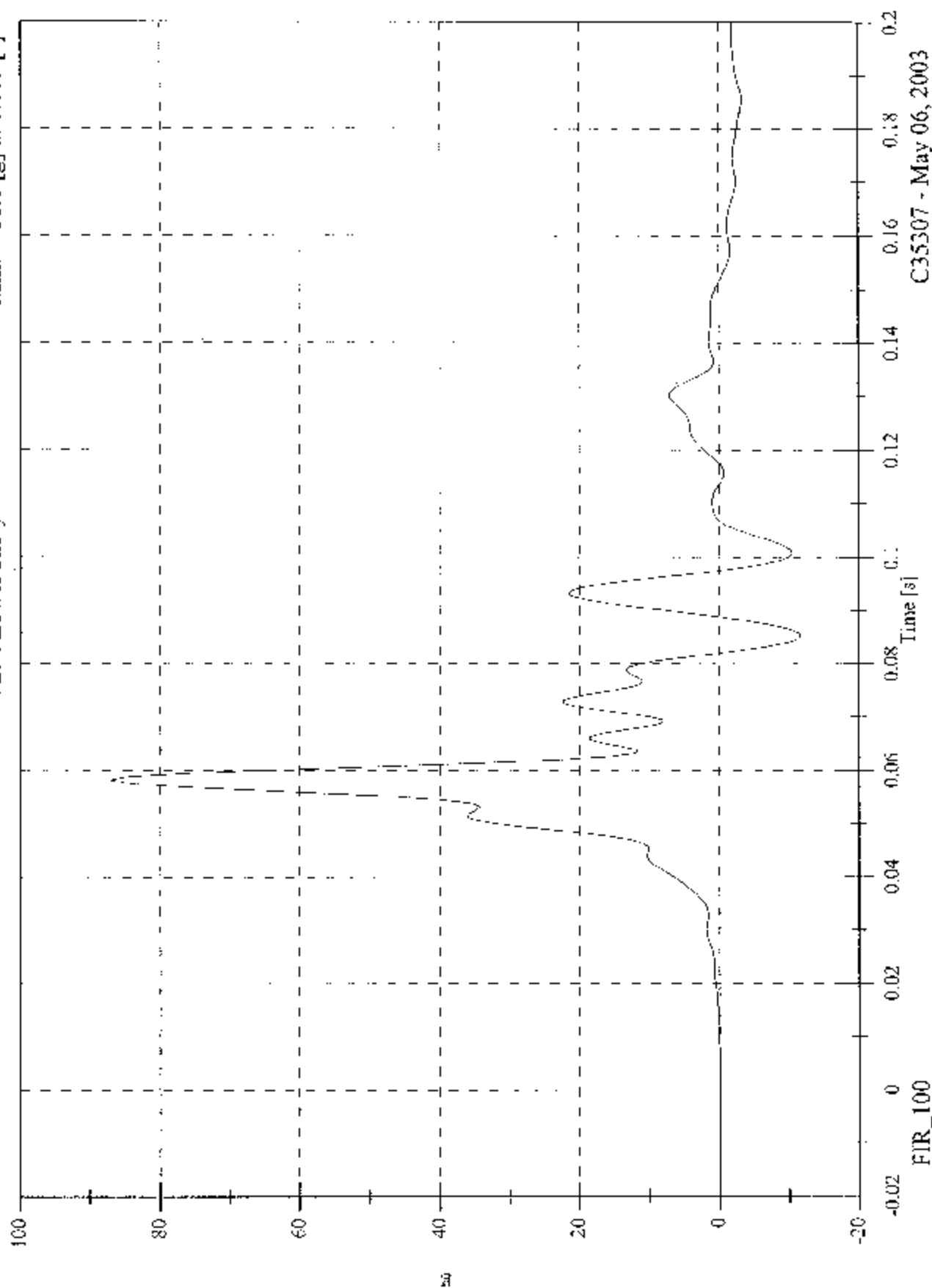


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 87.0 [g] at 0.058 [s]
Min: -11.6 [g] at 0.085 [s]

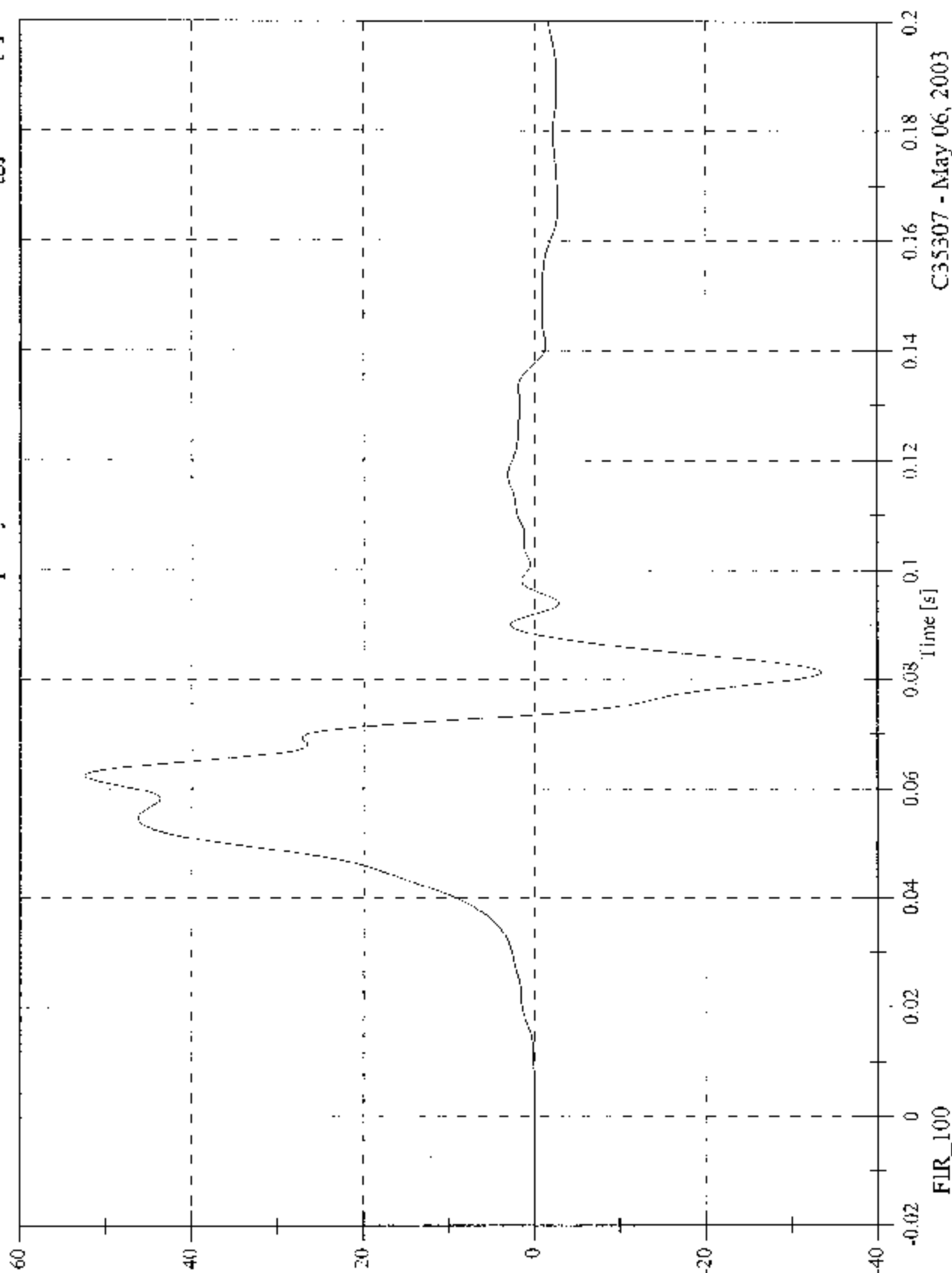
V2P4 Lower Rib y



2003 FNVSS 214D Test 8 2003 Honda Element

V2P4 Lower Spine y

Max: 52.6 [g] at 0.062 [s]
Min: -33.5 [g] at 0.081 [s]

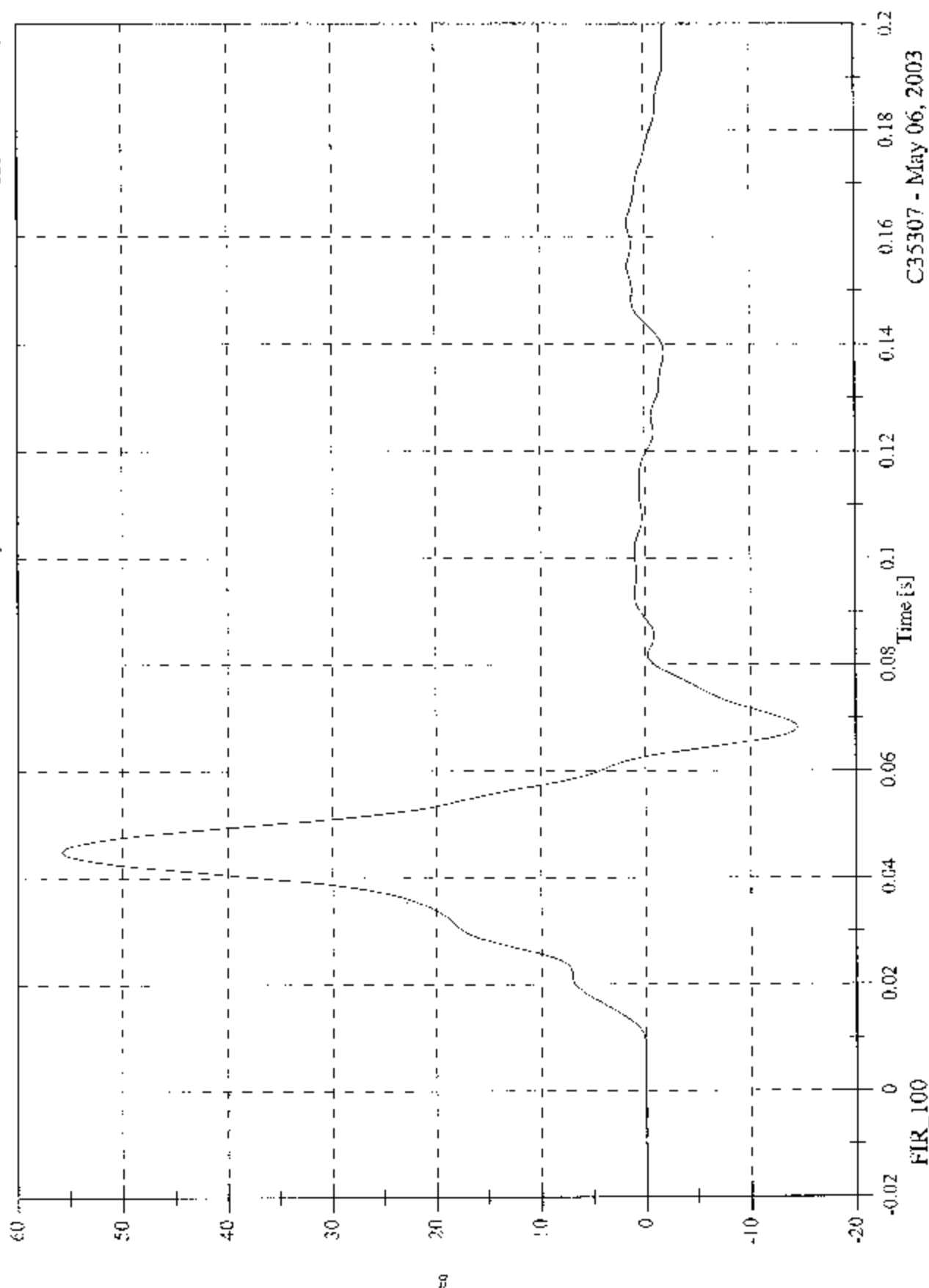


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 55.8 [g] at 0.045 [s]
Min: -14.5 [g] at 0.068 [s]

V2P4 Pelvic y

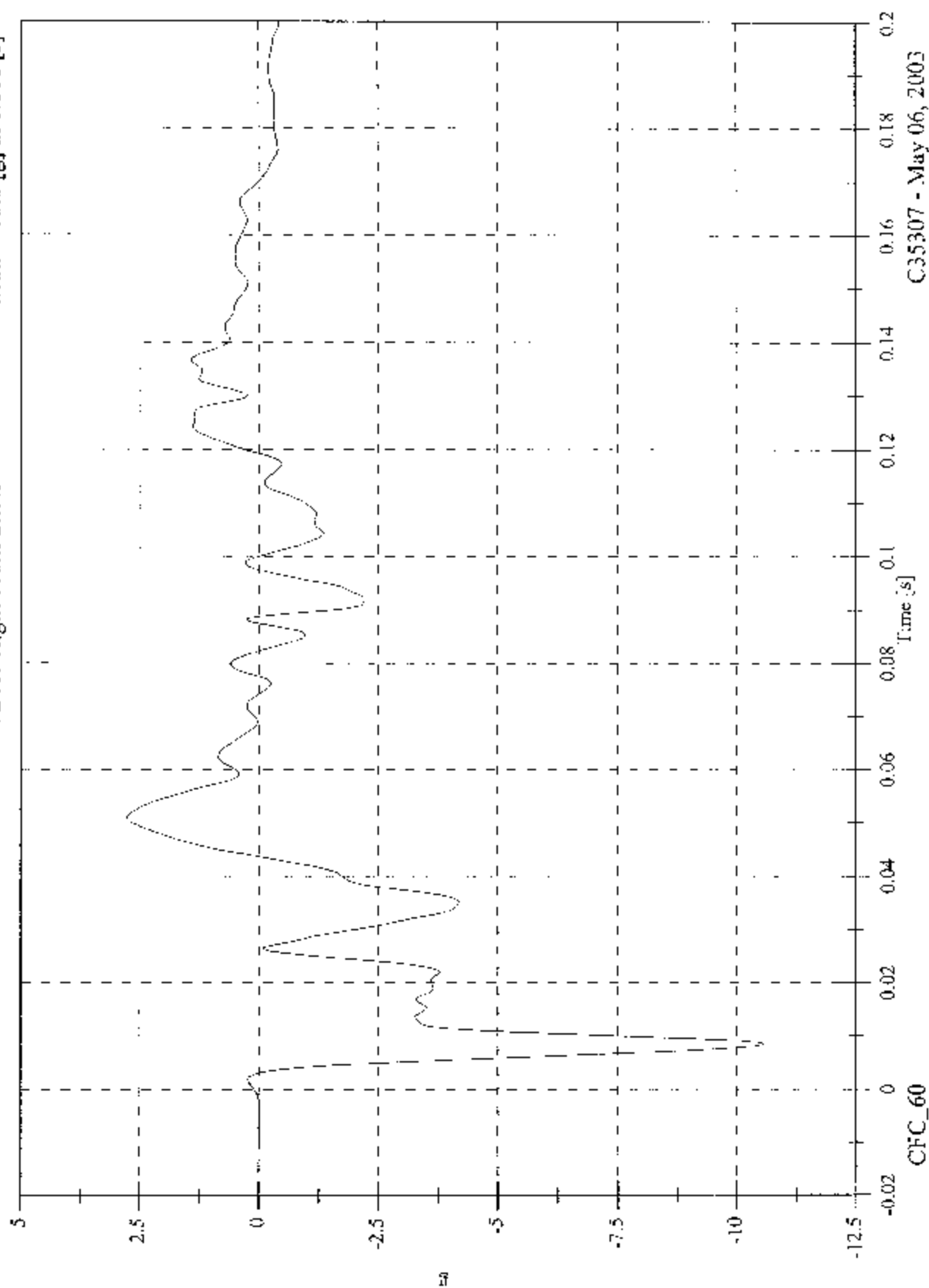


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Sill x

Max: 2.8 [g] at 0.051 [s]
Min: -10.6 [g] at 0.008 [s]

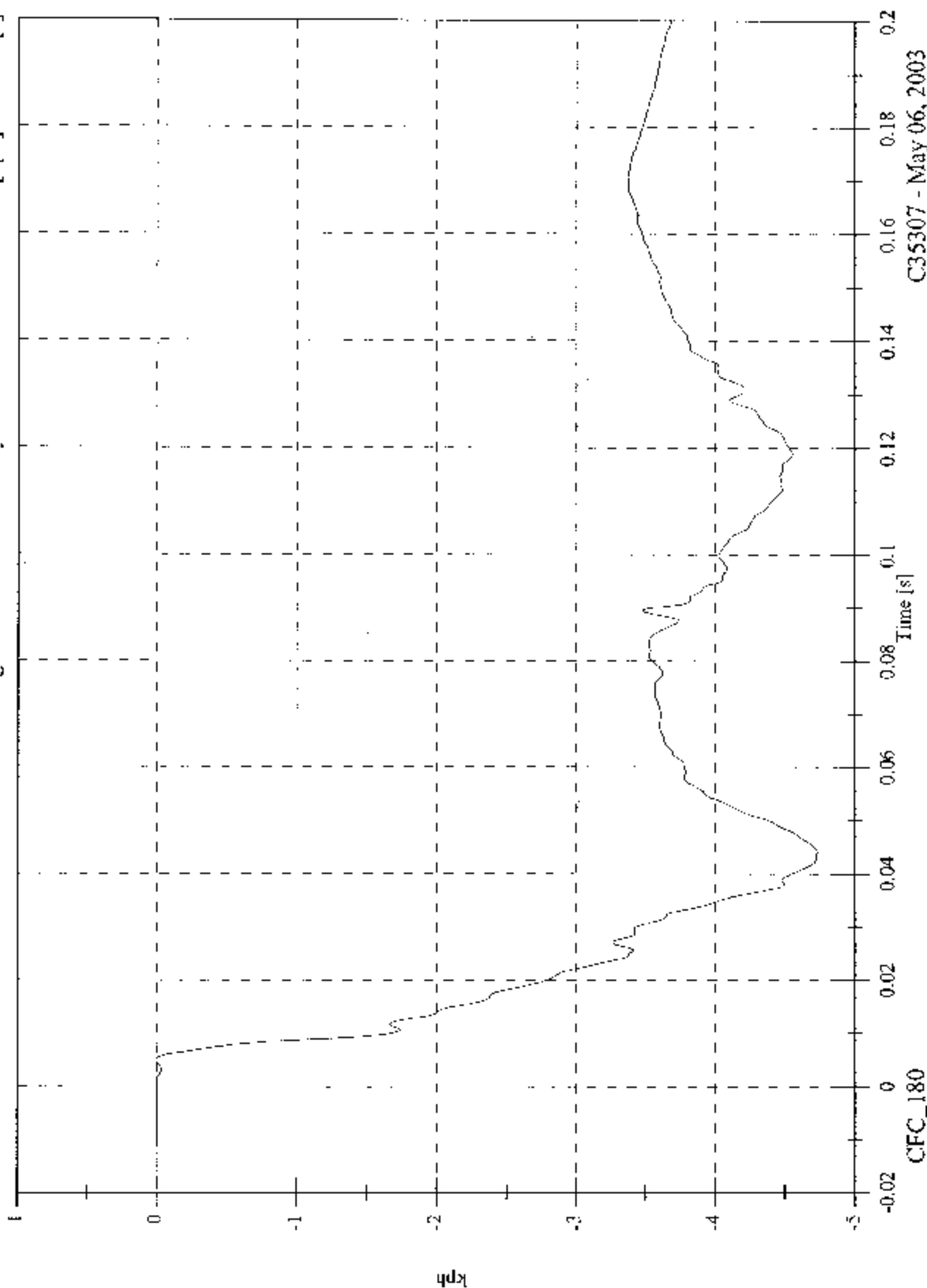


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V2 A1 Right Front Sill x Velocity

Max: 0.0 [kph] at 0.005 [s]
Min: -4.7 [kph] at 0.044 [s]

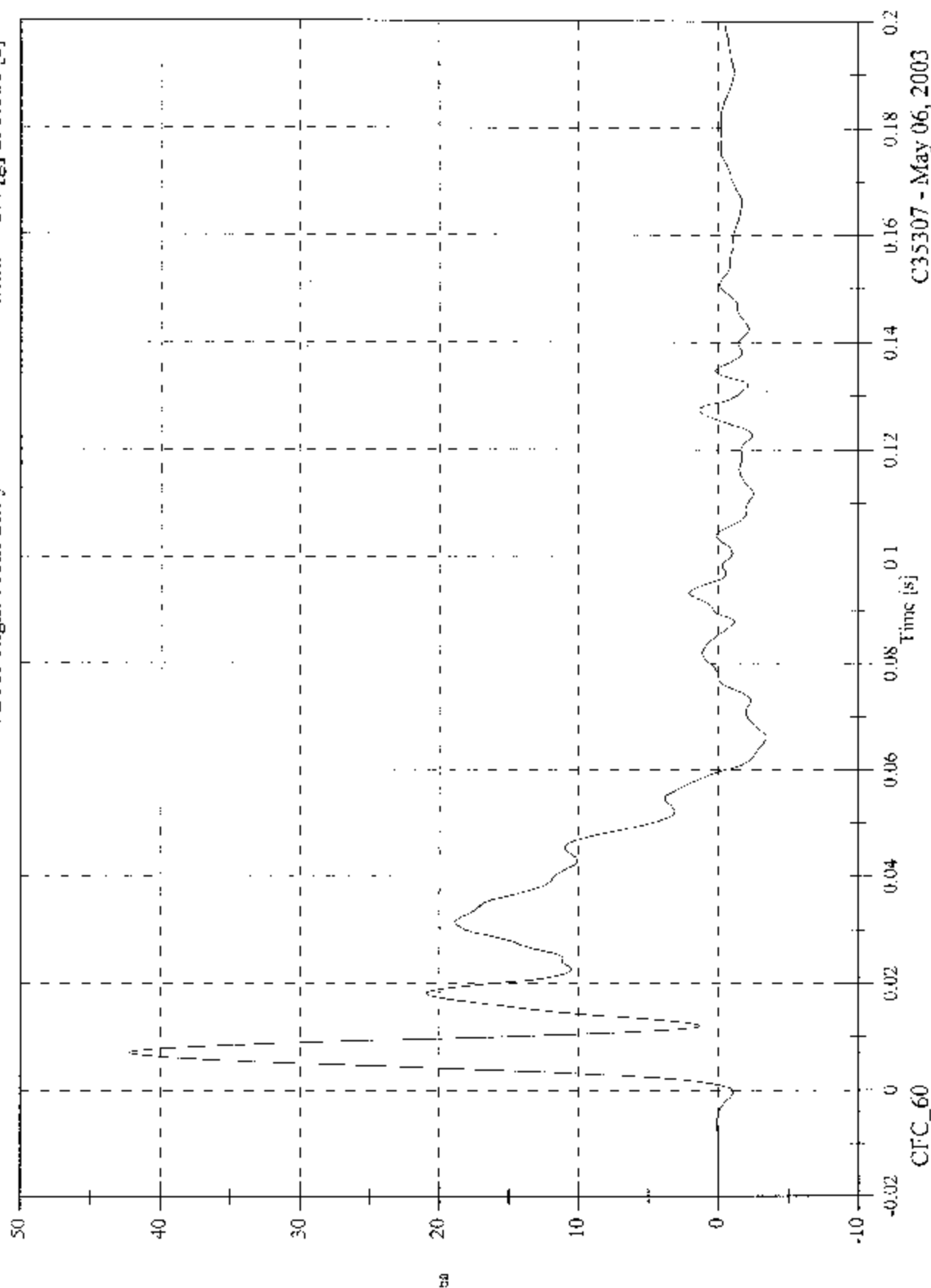


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front Silt y

Max: 42.2 [g] at 0.007 [s]
Min: -3.4 [g] at 0.066 [s]

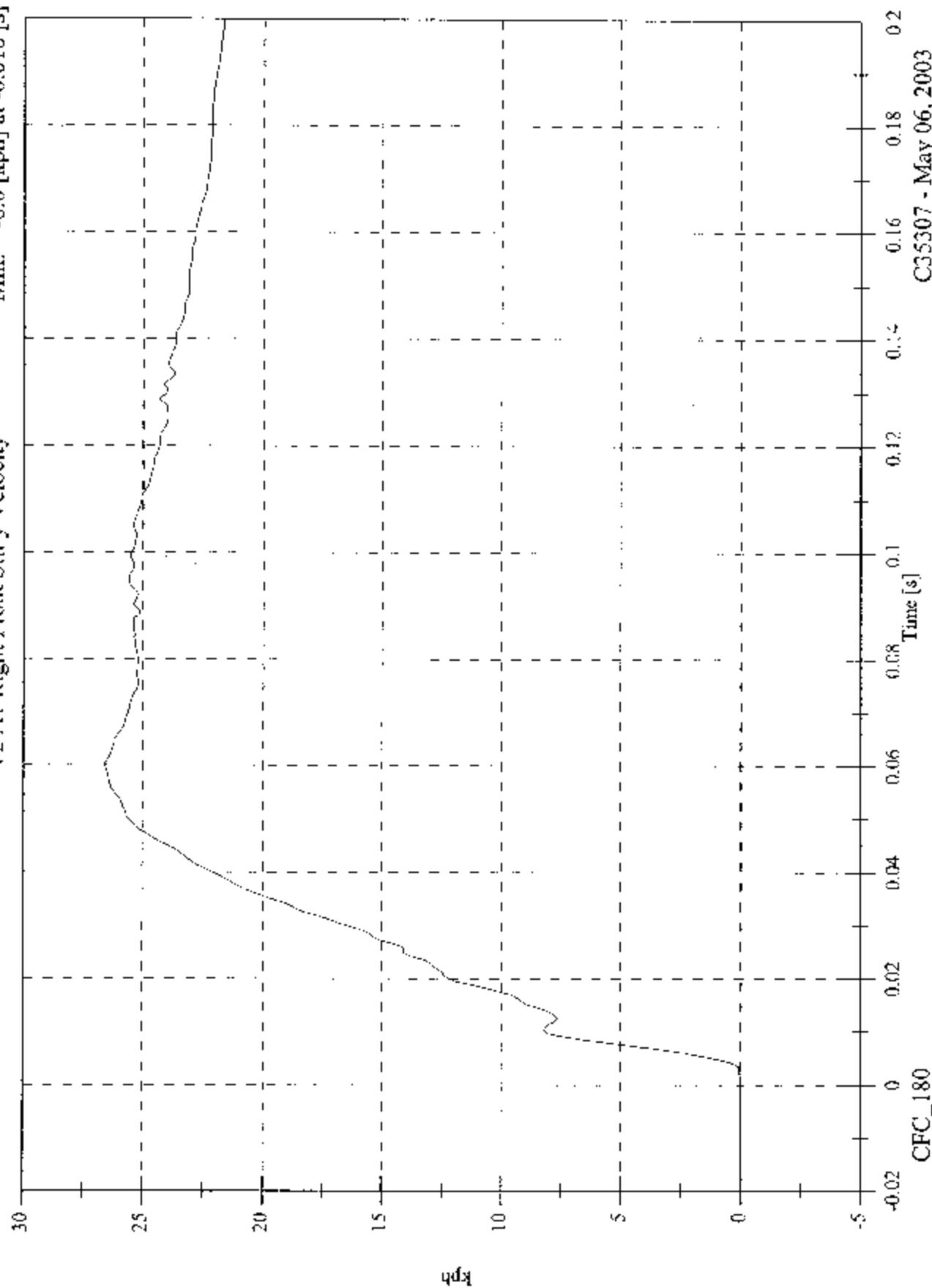


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 26.6 [kph] at 0.060 [s]
Min: -0.0 [kph] at -0.016 [s]

V2 A1 Right Front Sill y Velocity

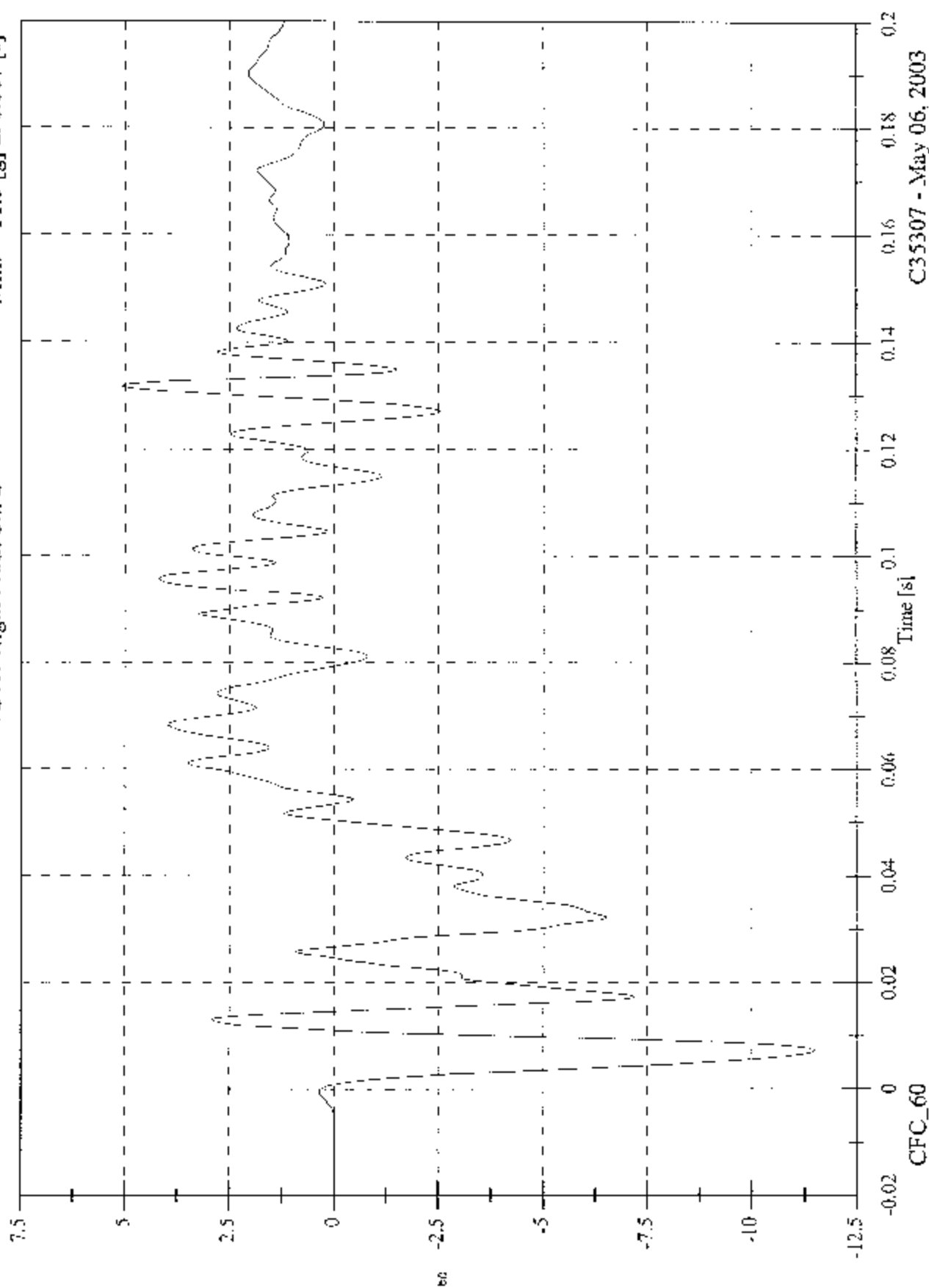


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A1 Right Front SII z

Max: 5.1 [g] at 0.132 [s]
Min: -11.5 [g] at 0.007 [s]

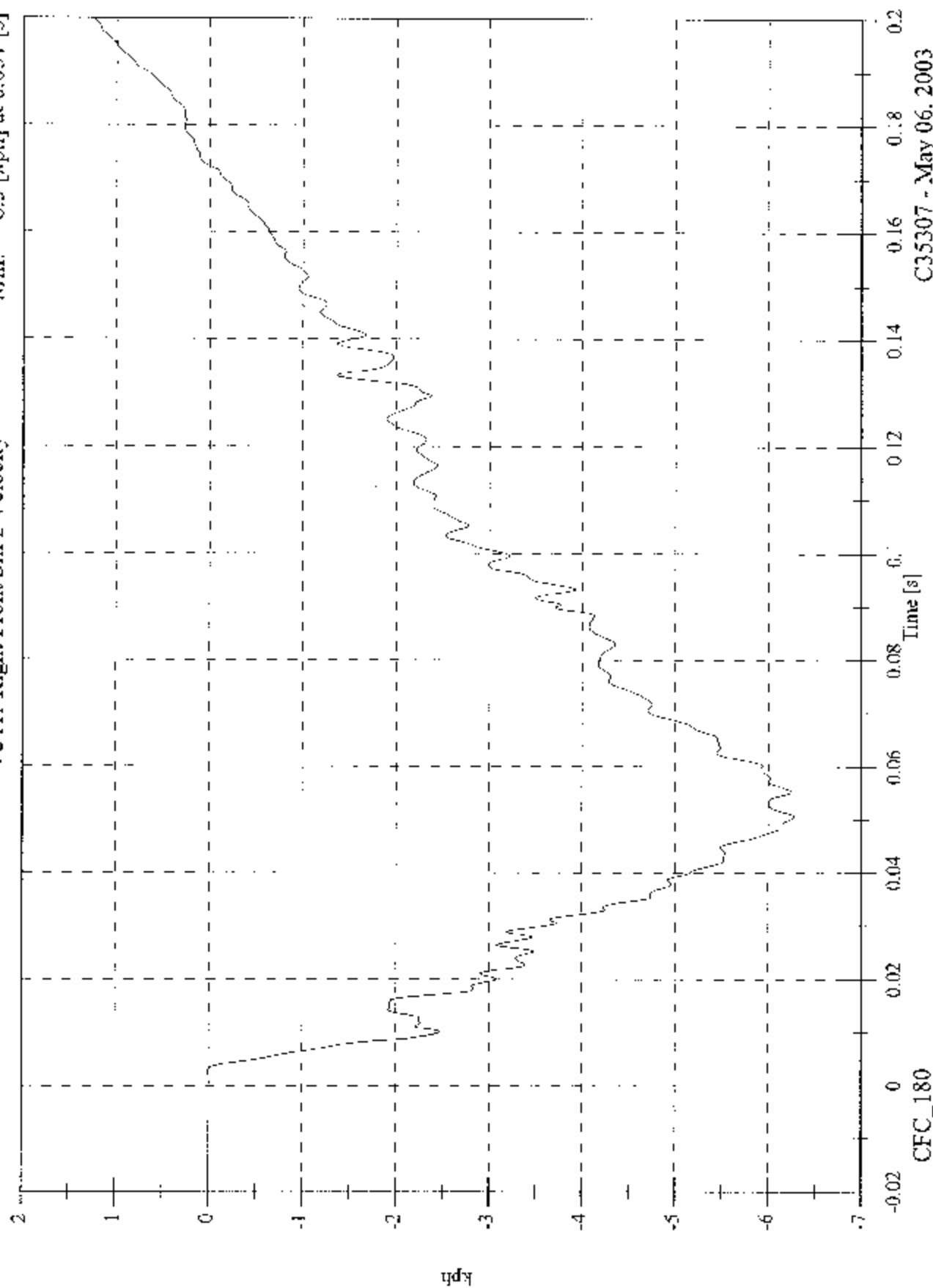


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V2 A1 Right Front Sill z Velocity

Max: 1.3 [kph] at 0.200 [s]
Min: -6.3 [kph] at 0.051 [s]

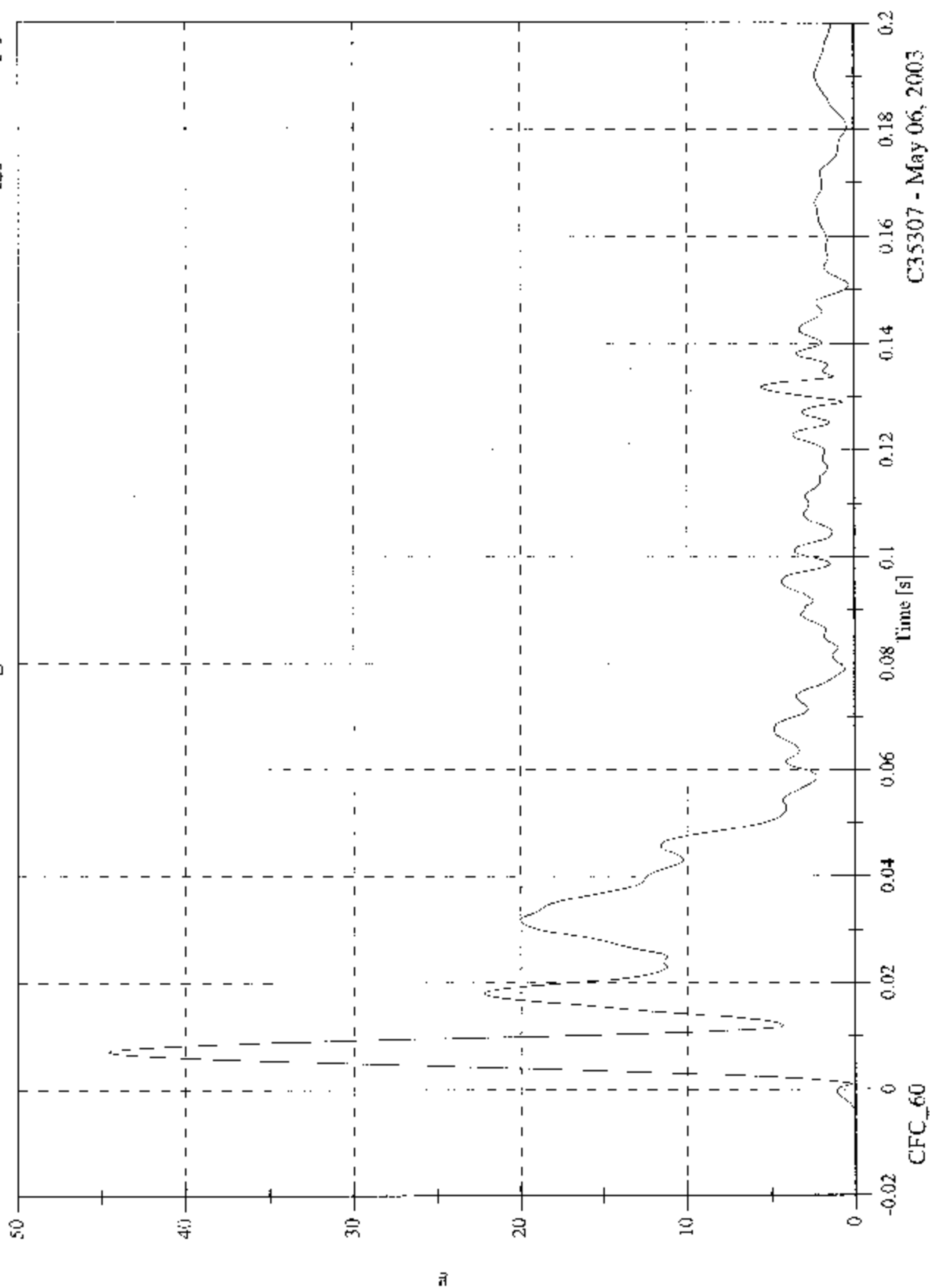


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 AI Right Front Sill Resultant

Max: 44.6 [g] at 0.007 [s]
Min: 0.0 [g] at -0.017 [s]

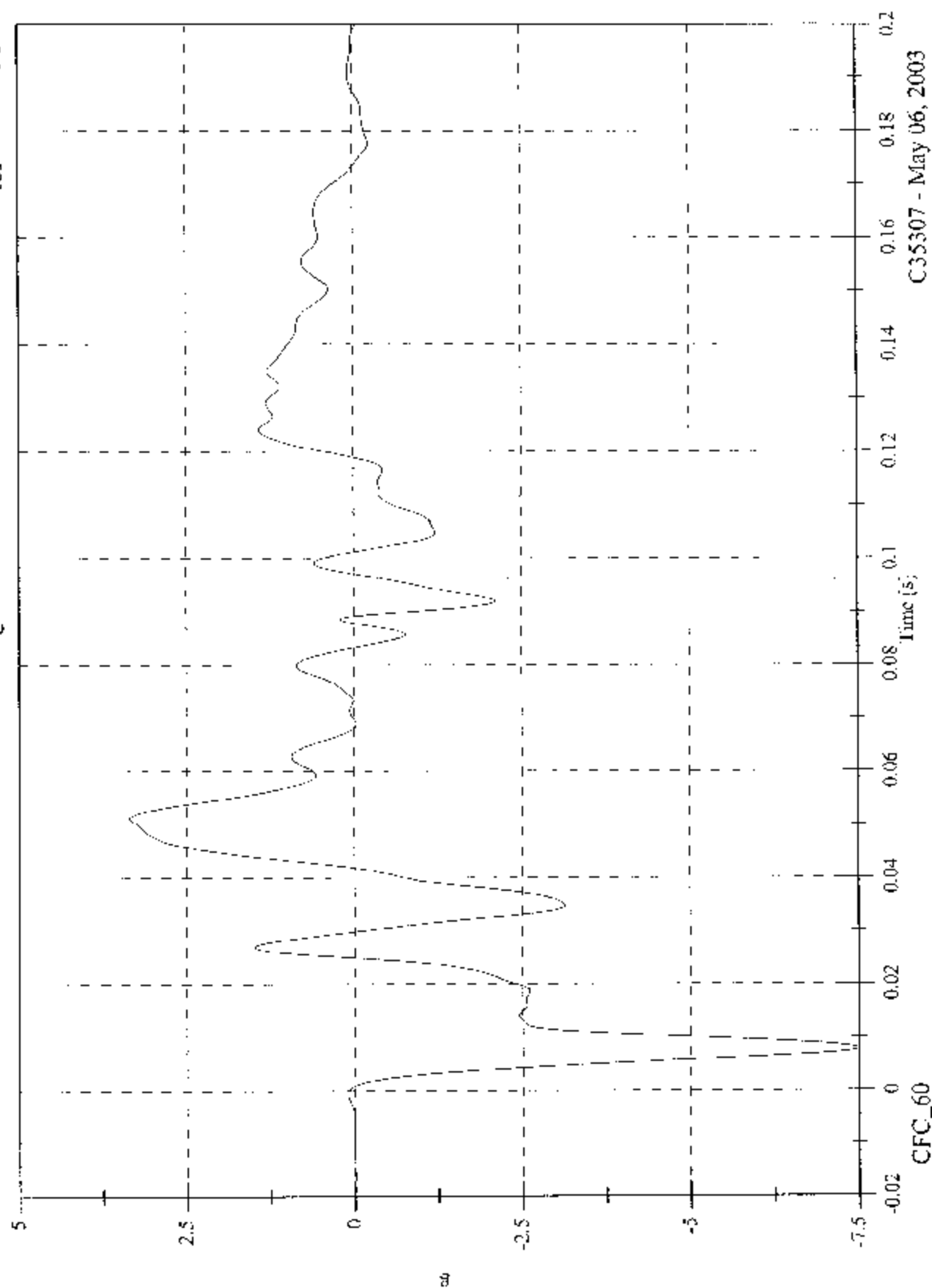


2003 FMVSS 214D Test 8 2003 Honda Element

Max: 3.3 [g] at 0.051 [s]

Min: -7.5 [g] at 0.008 [s]

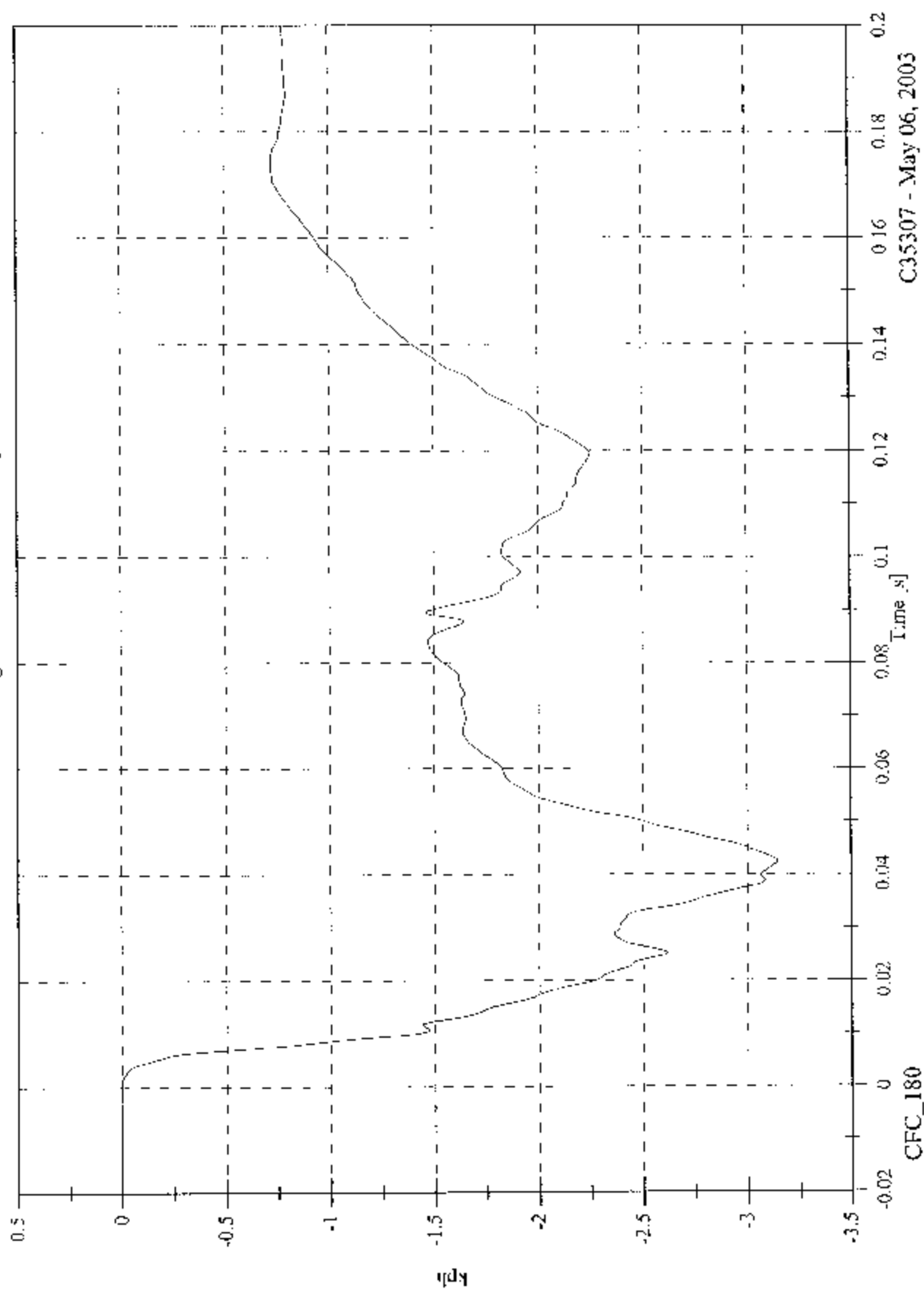
VZ A2 Right Rear Sill x



2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill x Velocity

Max: 0.0 [kph] at 0.000 [s]
Min: -3.1 [kph] at 0.042 [s]



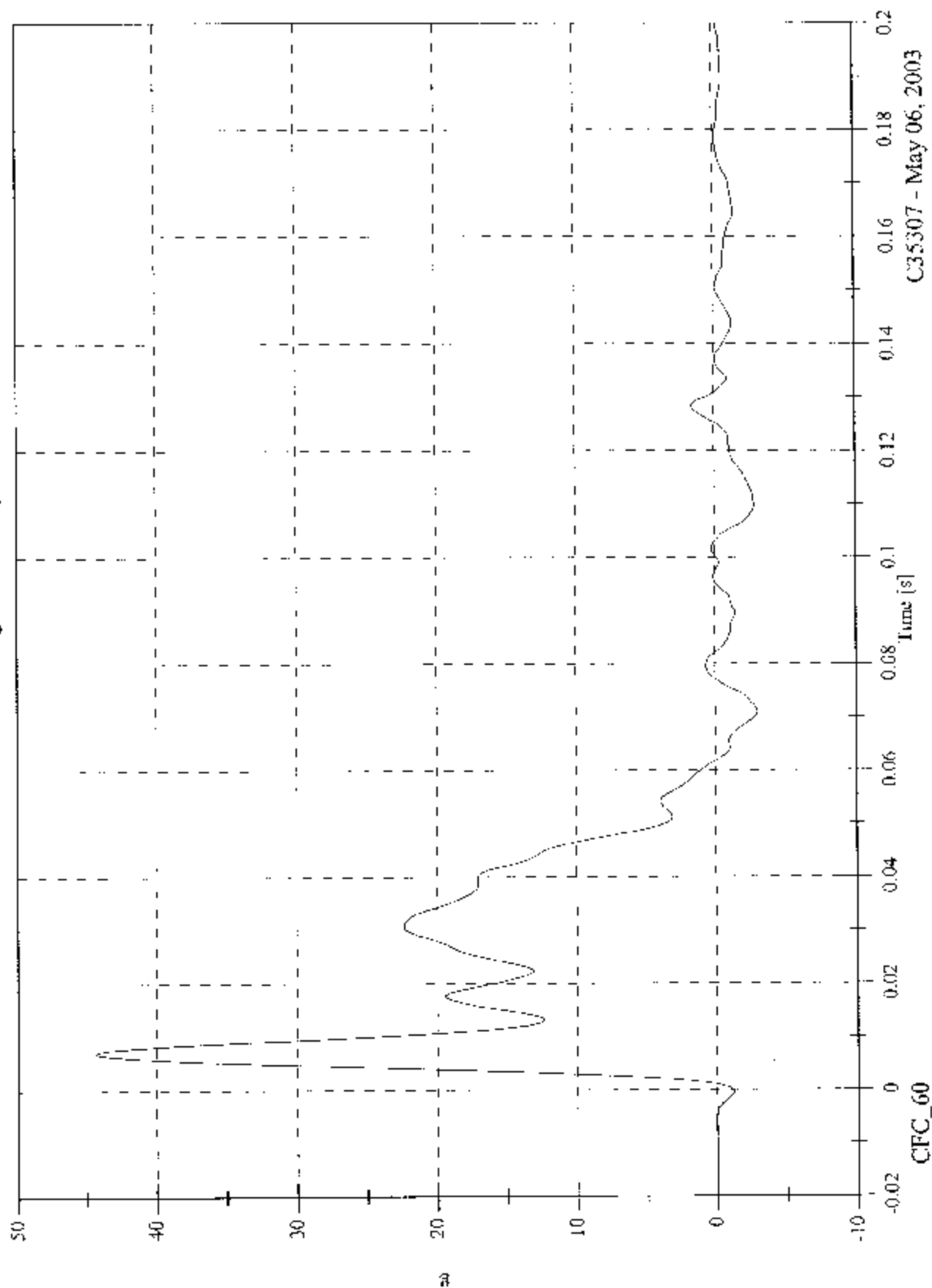
CFC_180

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V2 A2 Right Rear Sill y

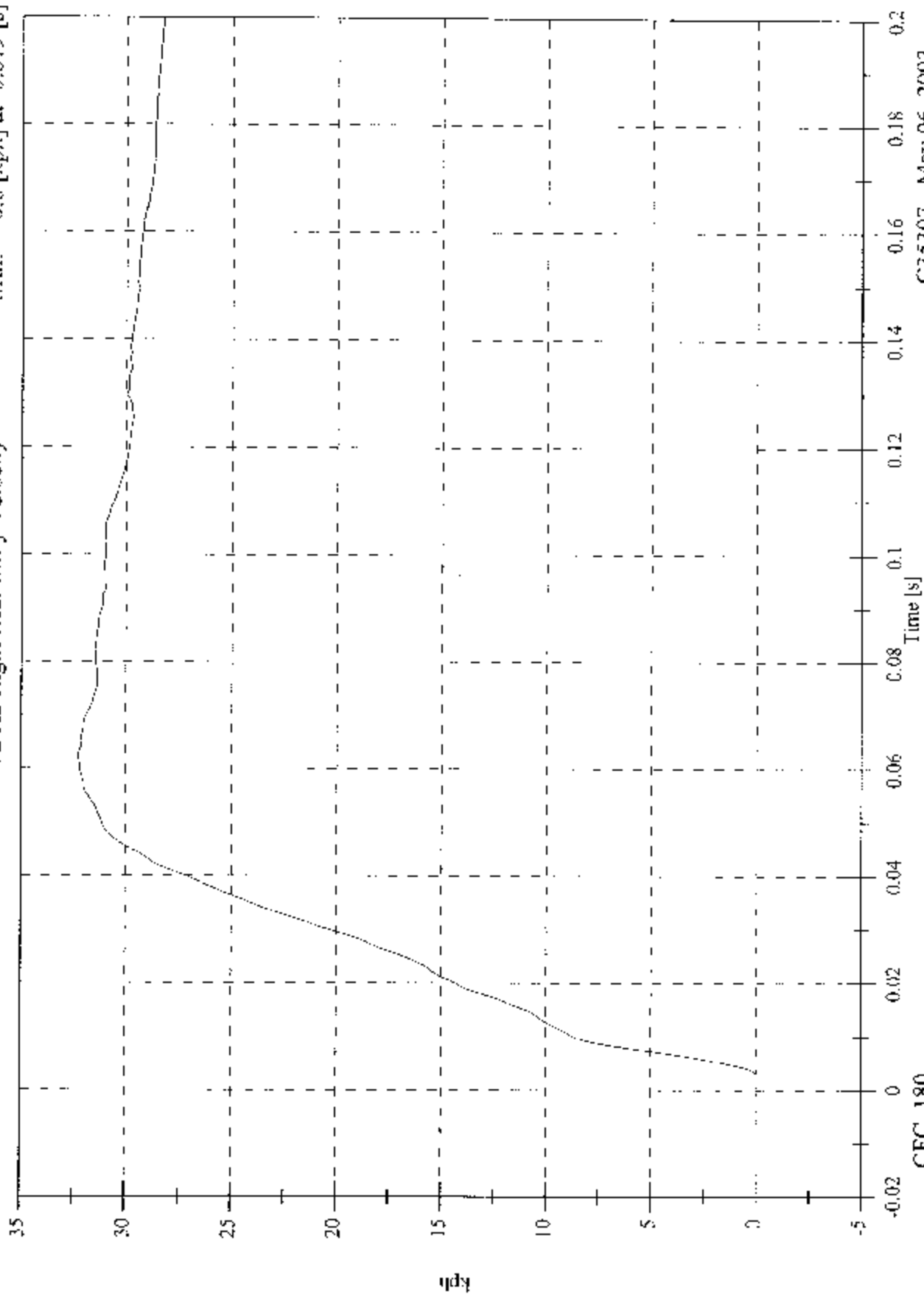
Max: 44.4 [g] at 0.007 [s]
Min: -3.0 [g] at 0.071 [s]



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Max: 32.3 [kph] at 0.062 [s]
 Min: -0.0 [kph] at -0.019 [s]

V2 A2 Right Rear Sill y Velocity

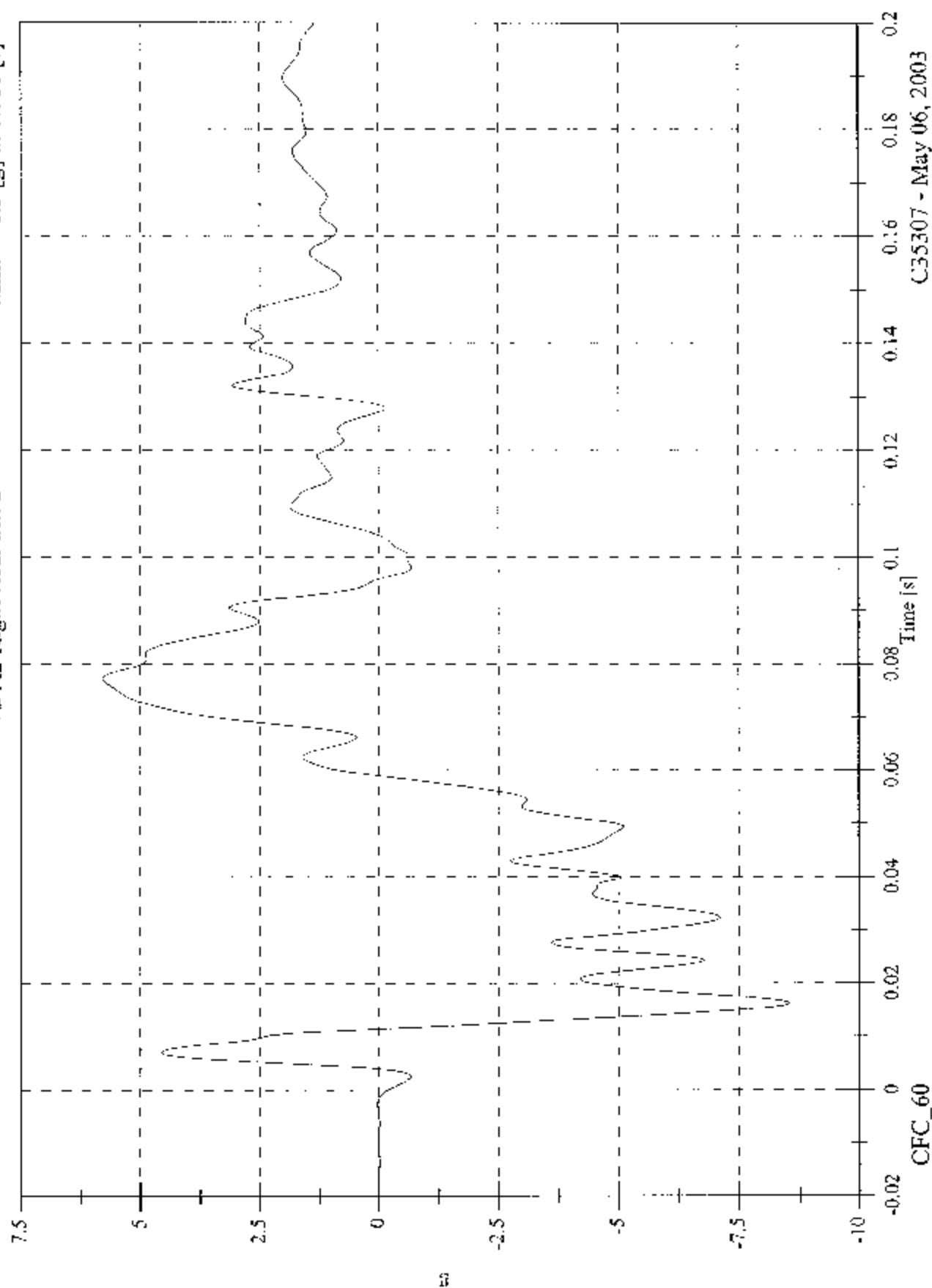


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill z

Max: 5.8 [g] at 0.077 [s]
Min: -8.5 [g] at 0.016 [s]

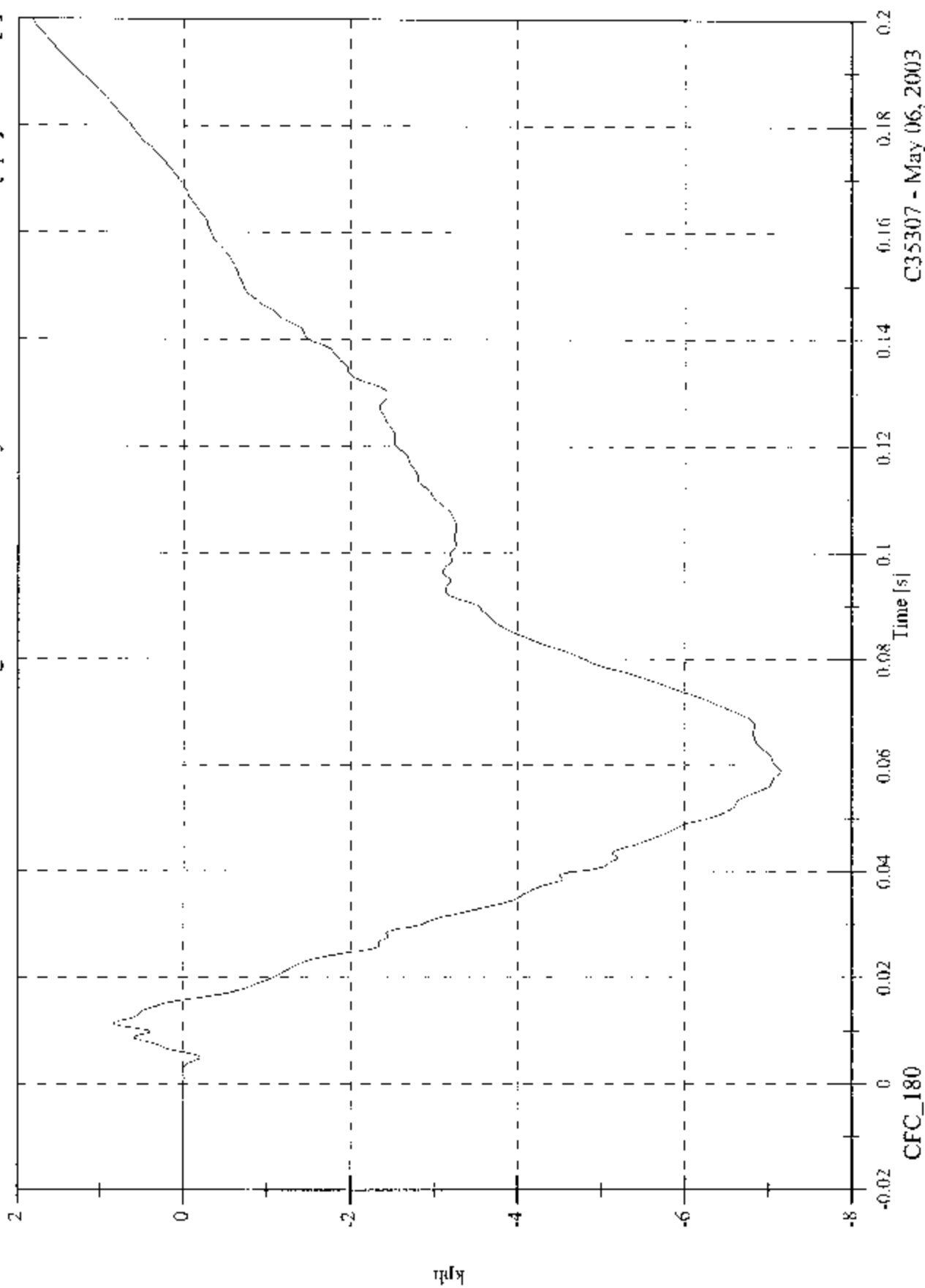


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A2 Right Rear Sill z Velocity

Max: 1.8 [kph] at 0.200 [s]
Min: -7.1 [kph] at 0.059 [s]

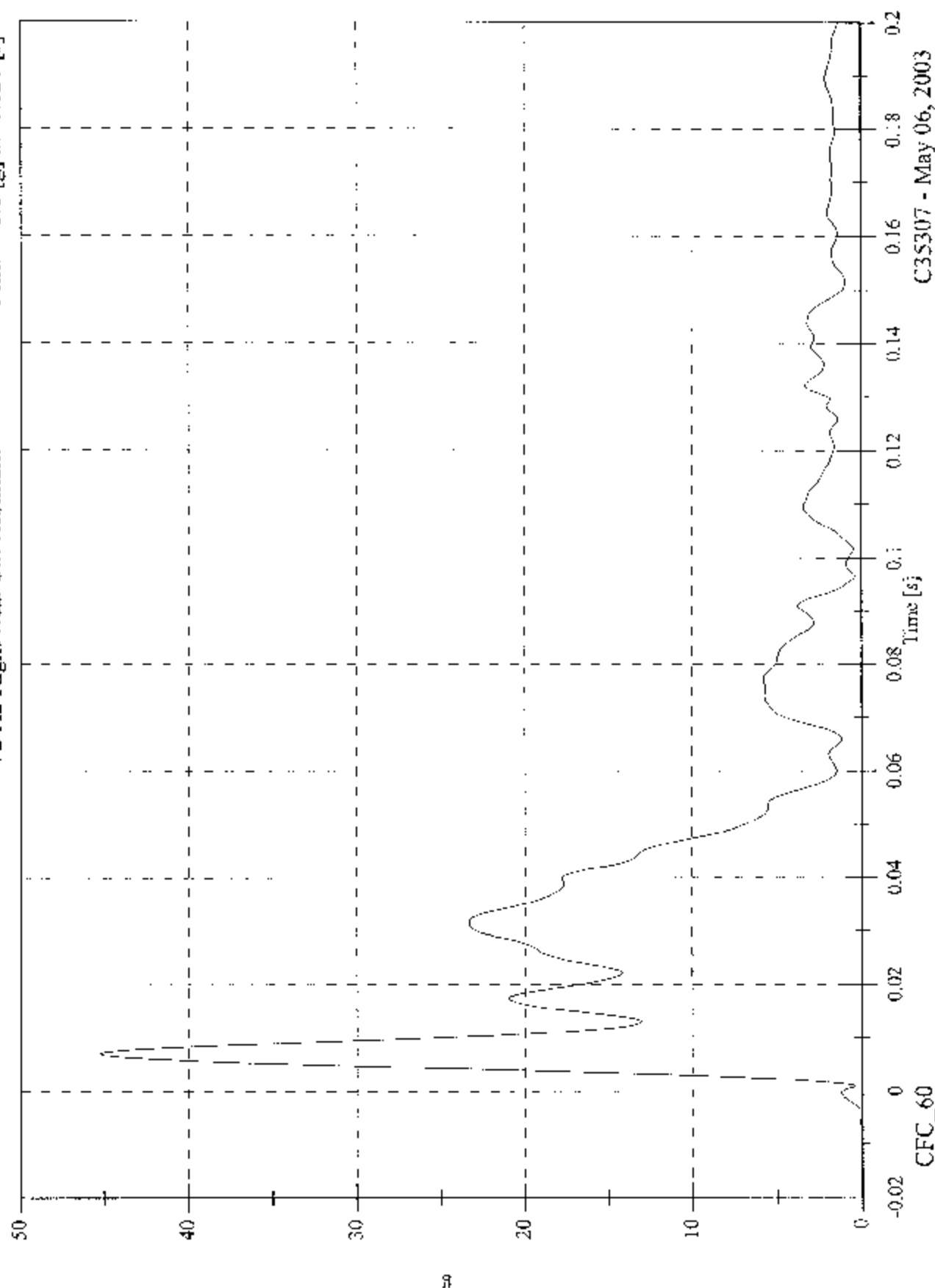


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V2 A2 Right Rear Sill Resultant

Max: 45.2 [g] at 0.007 [s]
Min: 0.0 [g] at -0.020 [s]

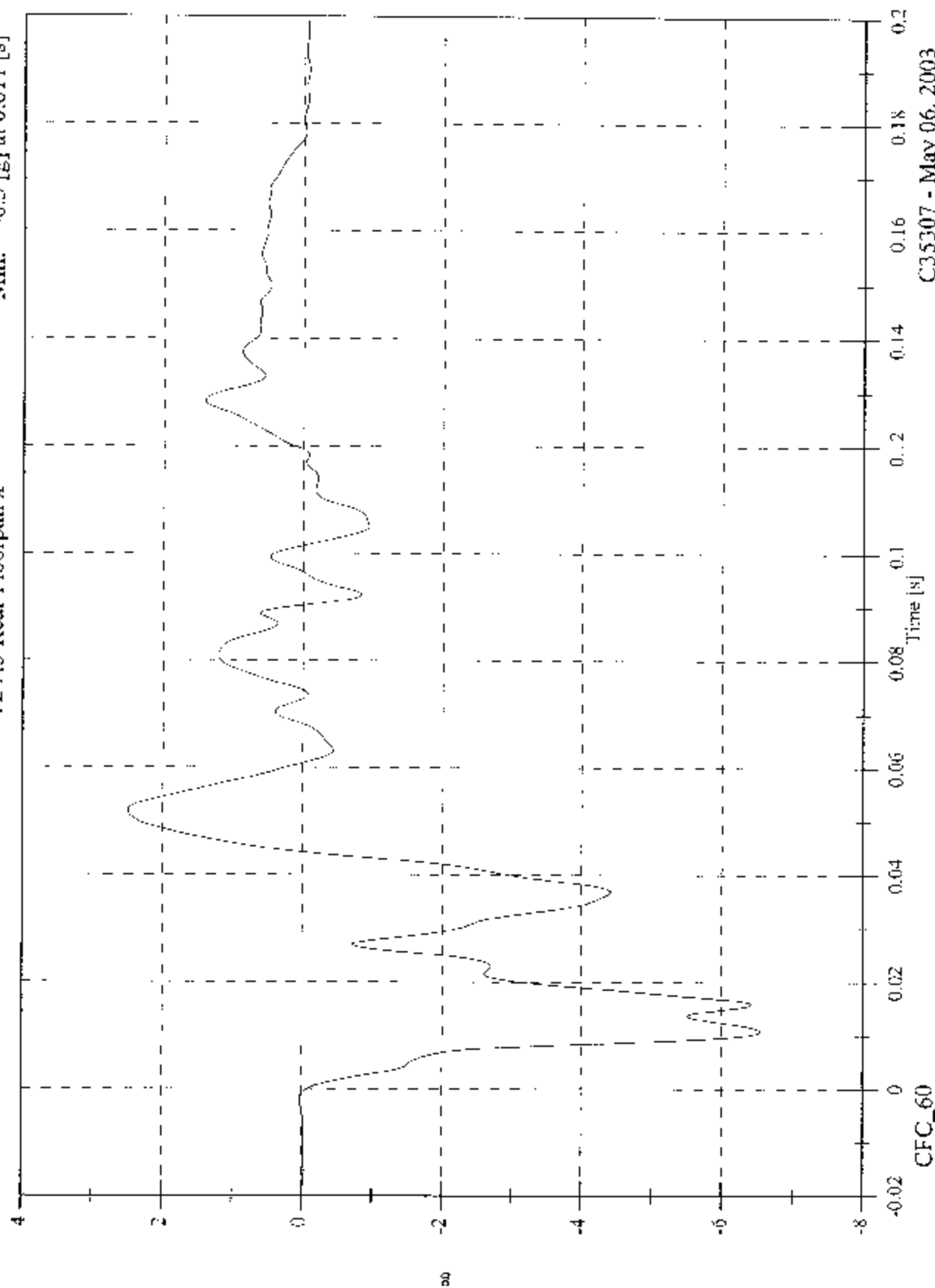


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 2.5 [g] at 0.052 [s]
Min: -6.5 [g] at 0.011 [s]

V2 A3 Rear Floorpan x

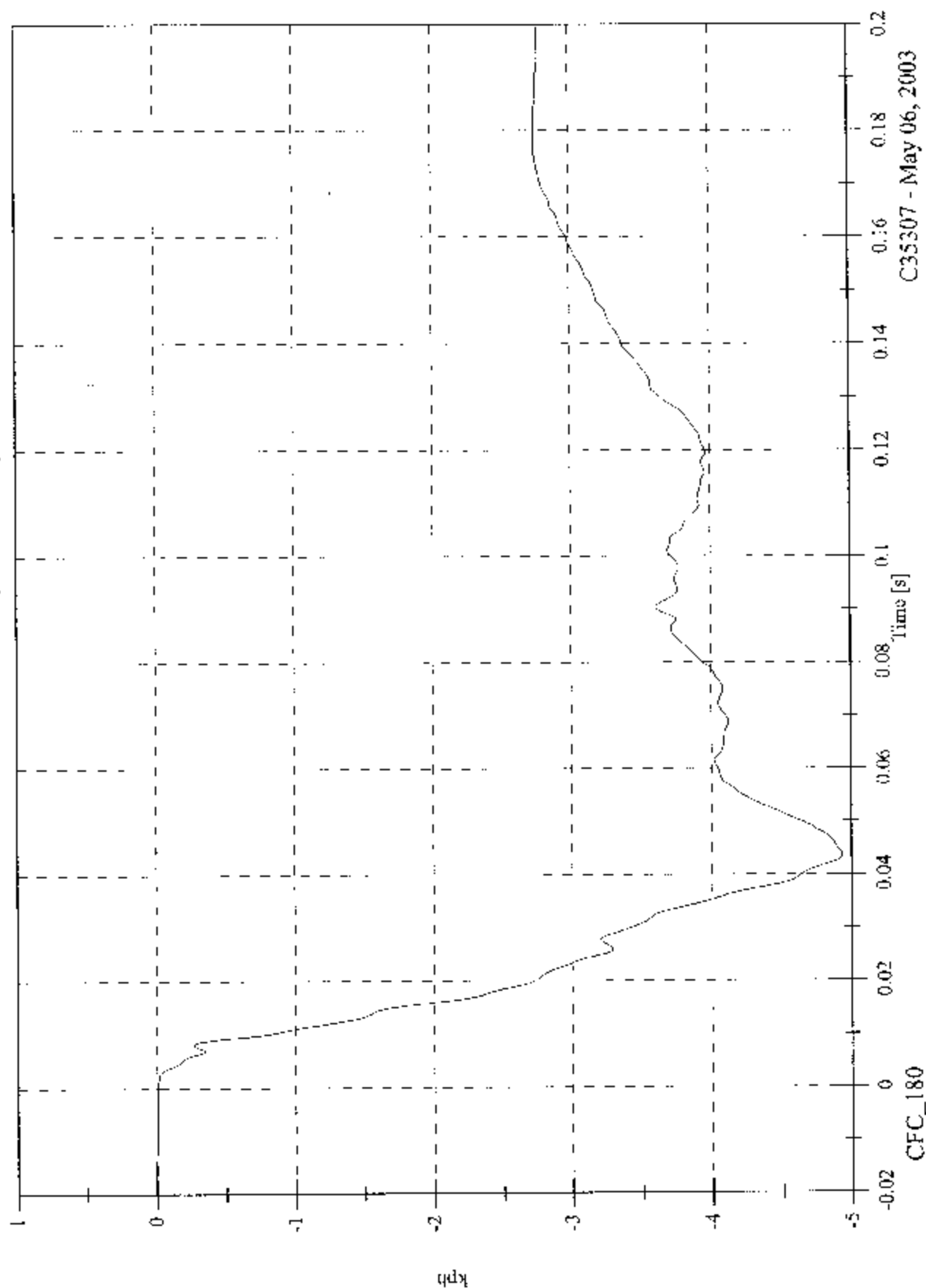


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V2 A3 Rear Floorpan x Velocity

Max: 0.0 [kph] at -0.020 [s]
Min: -4.9 [kph] at 0.043 [s]



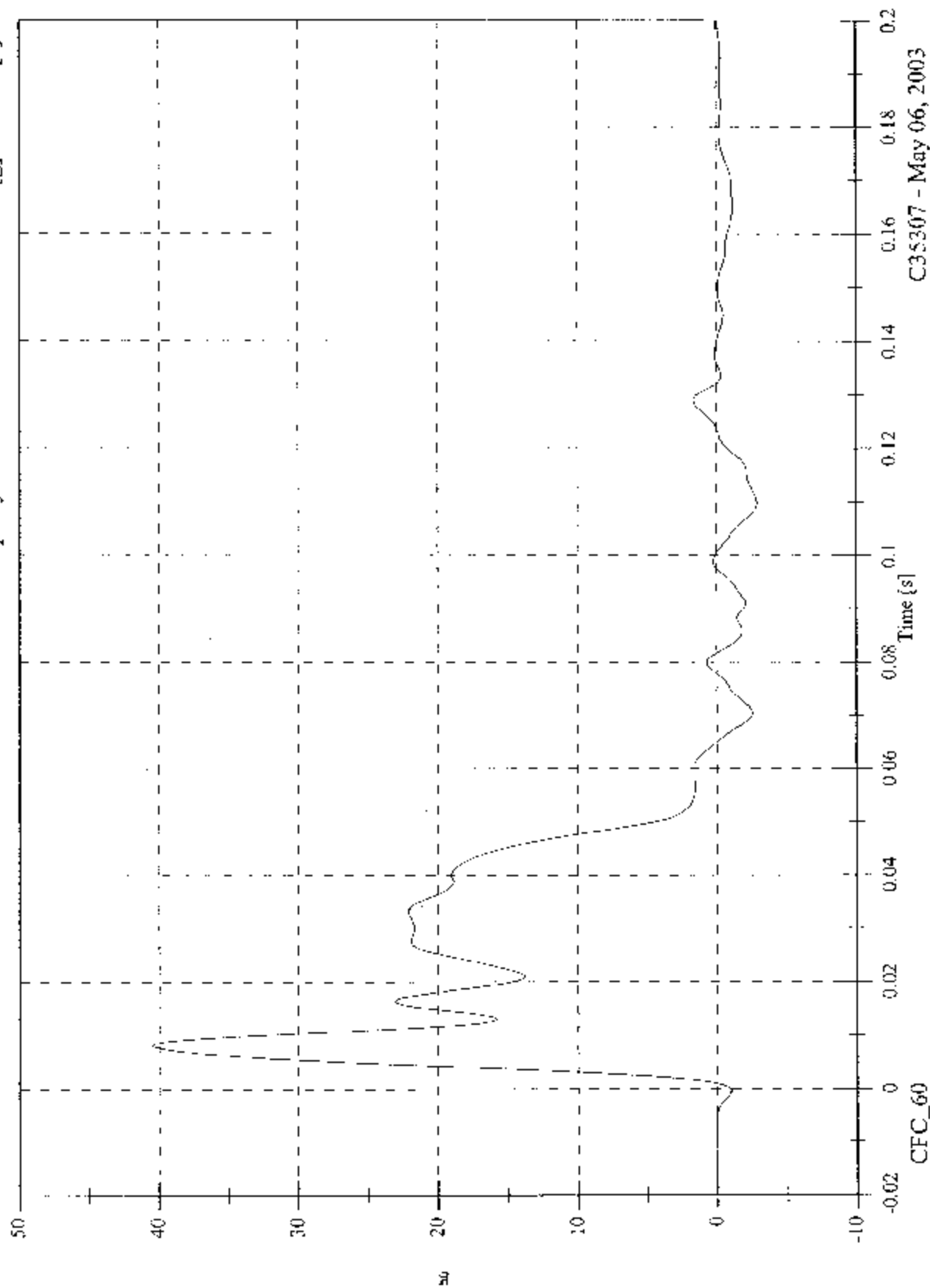
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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 40.5 [g] at 0.008 [s]

V2 A3 Rear Floorpan y

Min: -2.8 [g] at 0.110 [s]

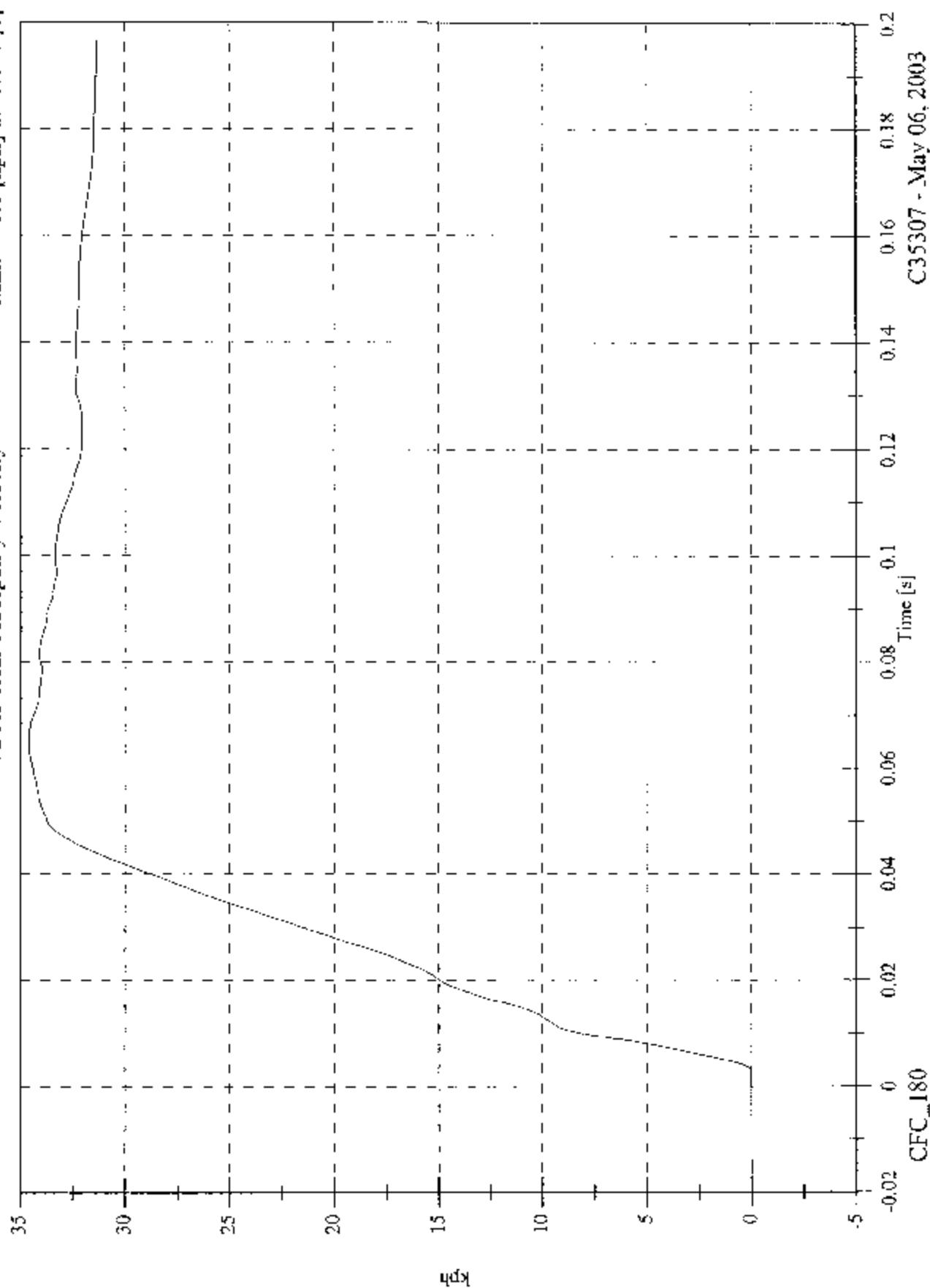


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 34.6 [kph] at 0.064 [s]
Min: -0.0 [kph] at -0.020 [s]

V2 A3 Rear Floorpan y Velocity

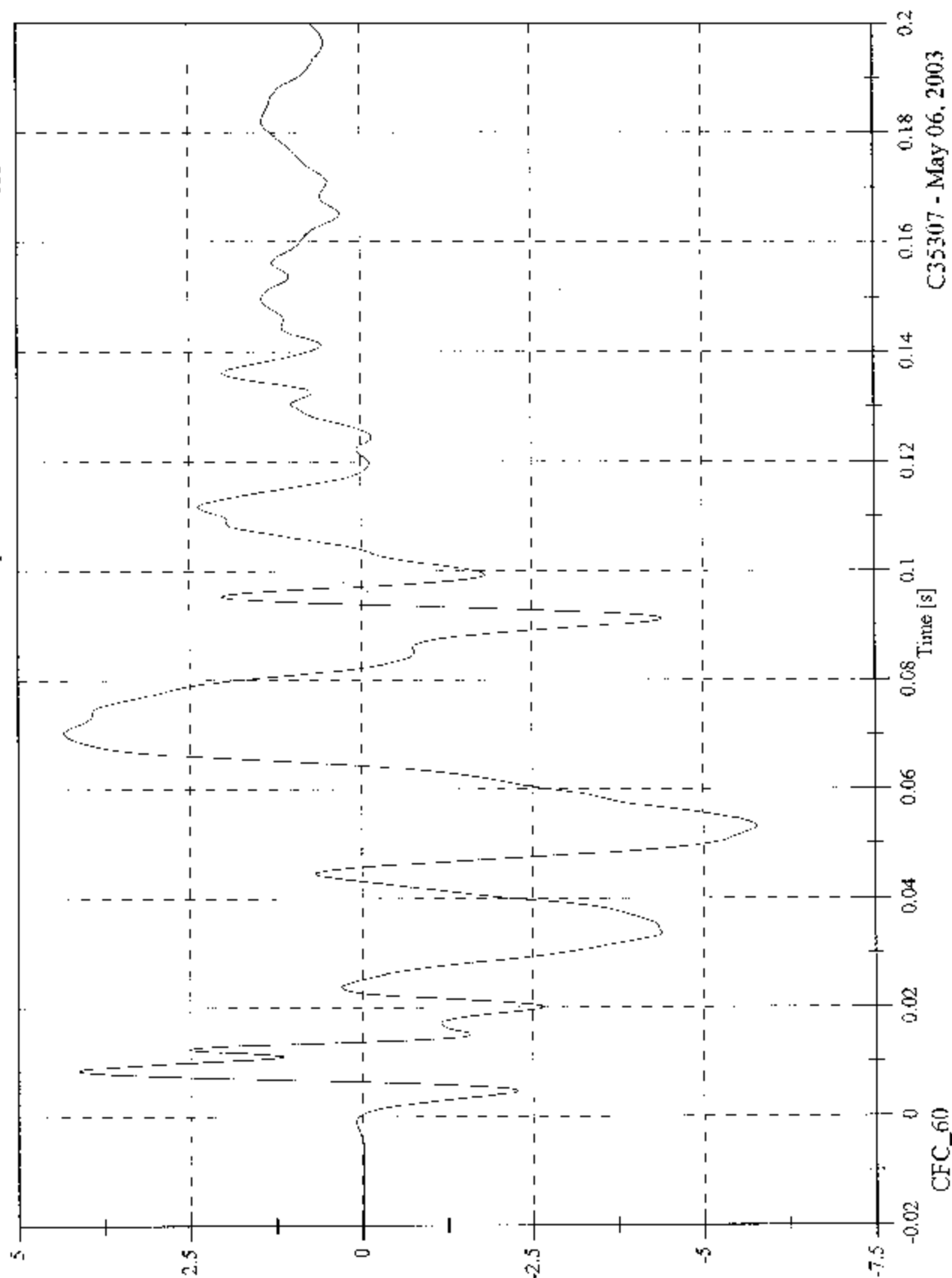


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 4.3 [g] at 0.070 [s]
Min: -5.8 [g] at 0.053 [s]

V2 A3 Rear Floorpan z

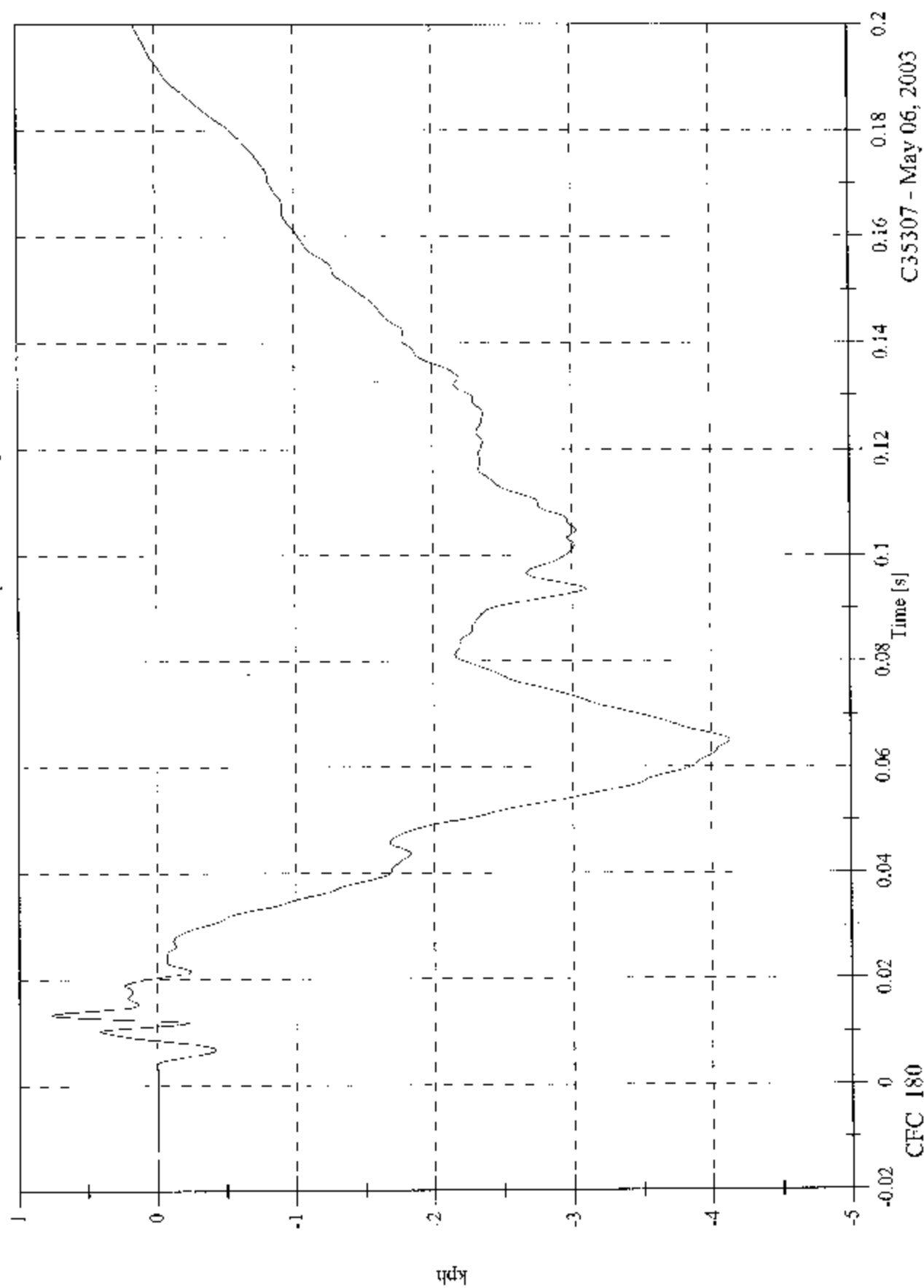


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V2 A3 Rear Floorpan z Velocity

Max: 0.8 [kph] at 0.013 [s]
Min: -4.1 [kph] at 0.065 [s]



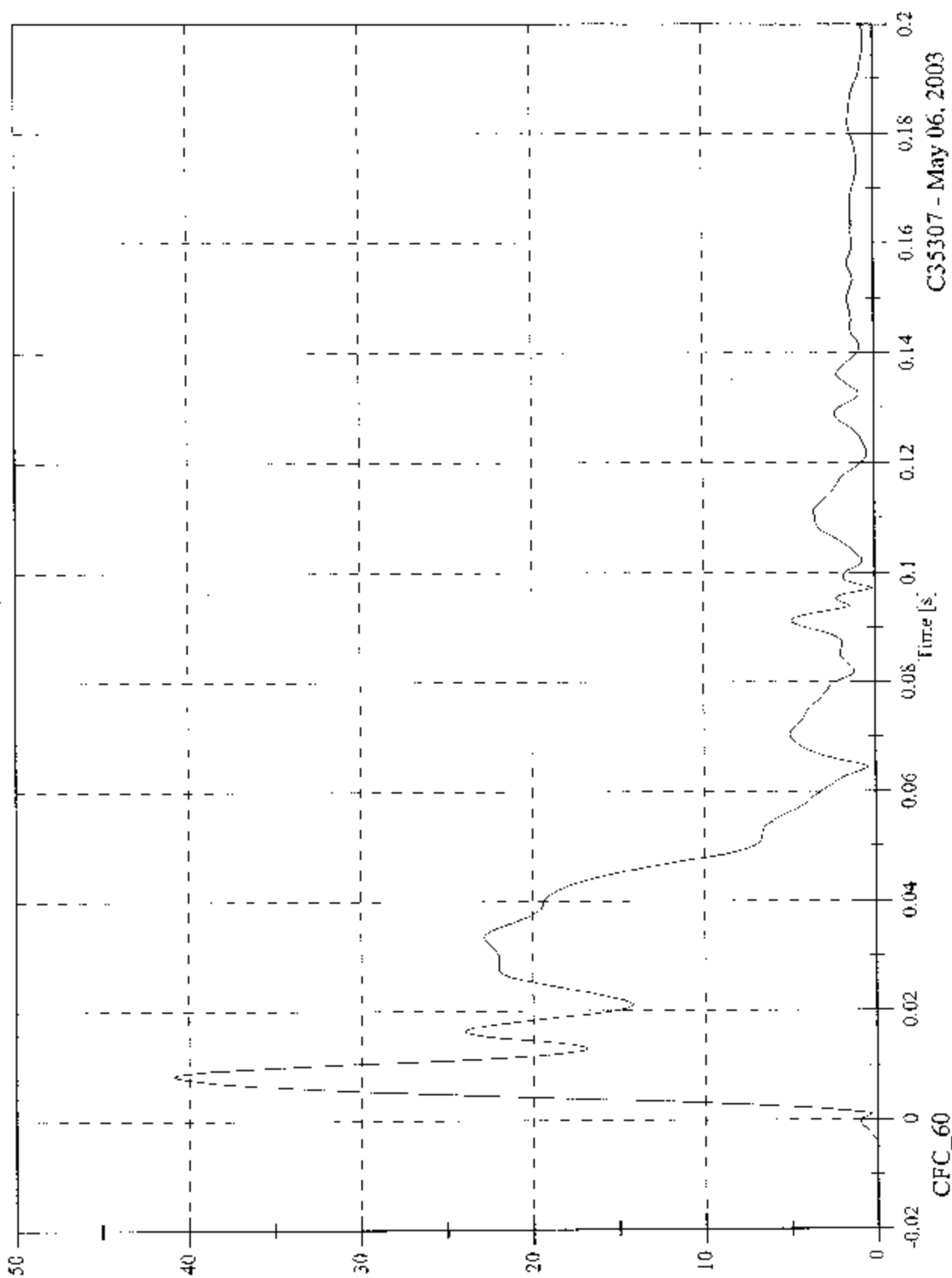
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2 A3 Rear Floorpan Resultant

Max: 40.8 [g] at 0.008 [s]

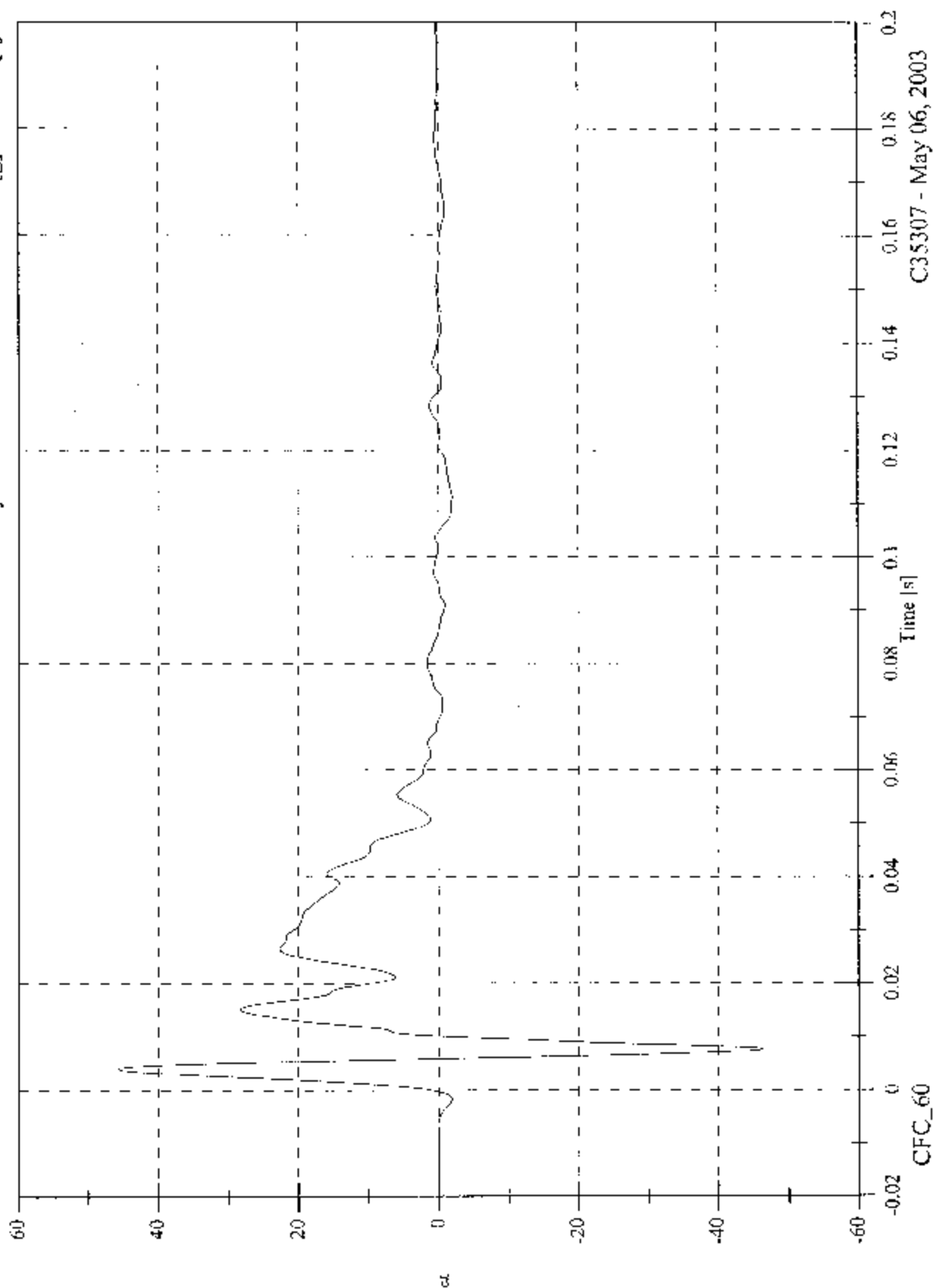
Min: 0.0 [g] at -0.020 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2 A4 Left Rear Sill y

Max: 45.8 [g] at 0.004 [s]
Min: -46.3 [g] at 0.008 [s]

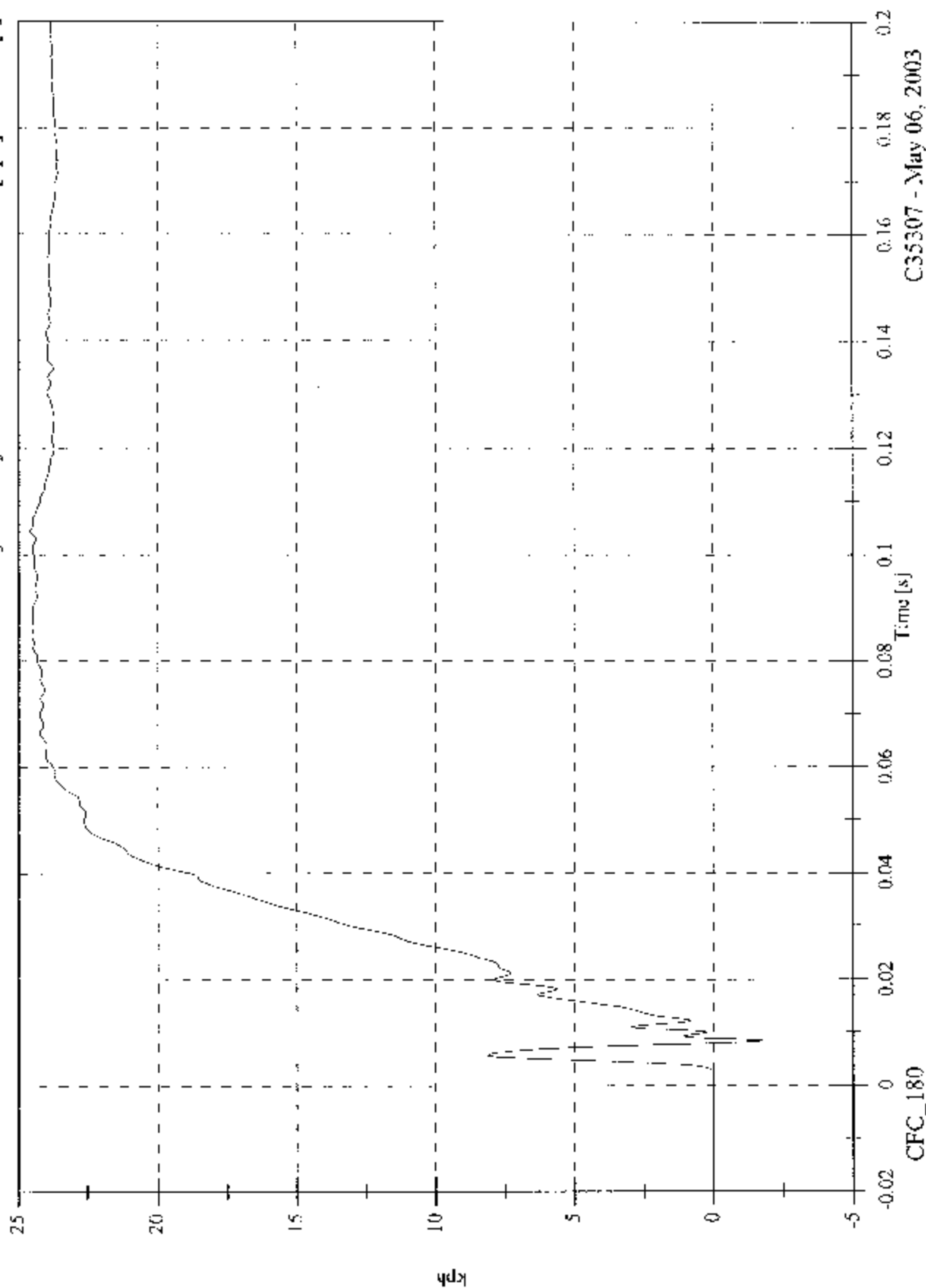


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Max: 24.6 [kph] at 0.104 [s]
Min: -1.8 [kph] at 0.008 [s]

V2 A4 Left Rear Sill y Velocity

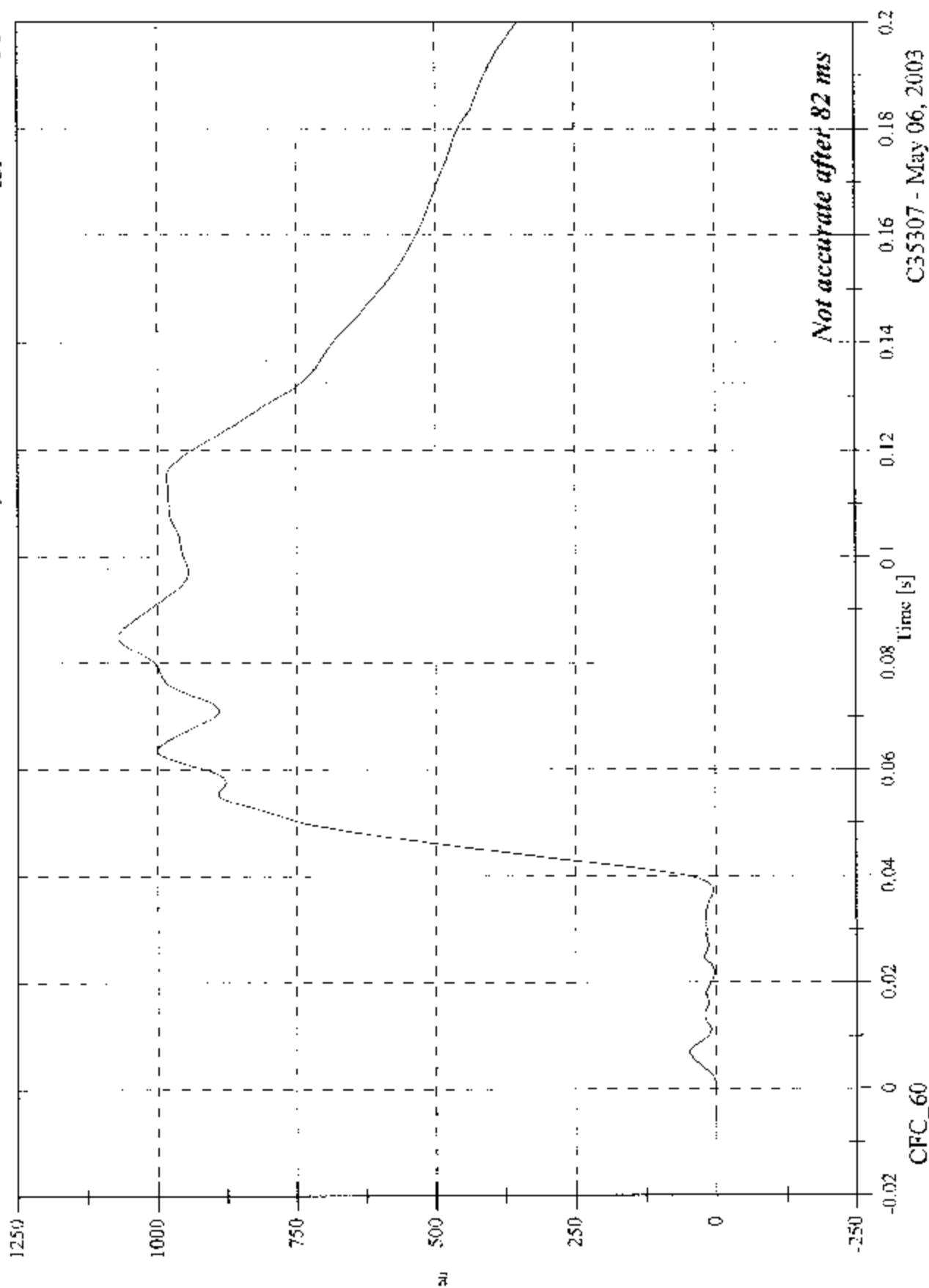


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V2 A5 Left Front Sill y

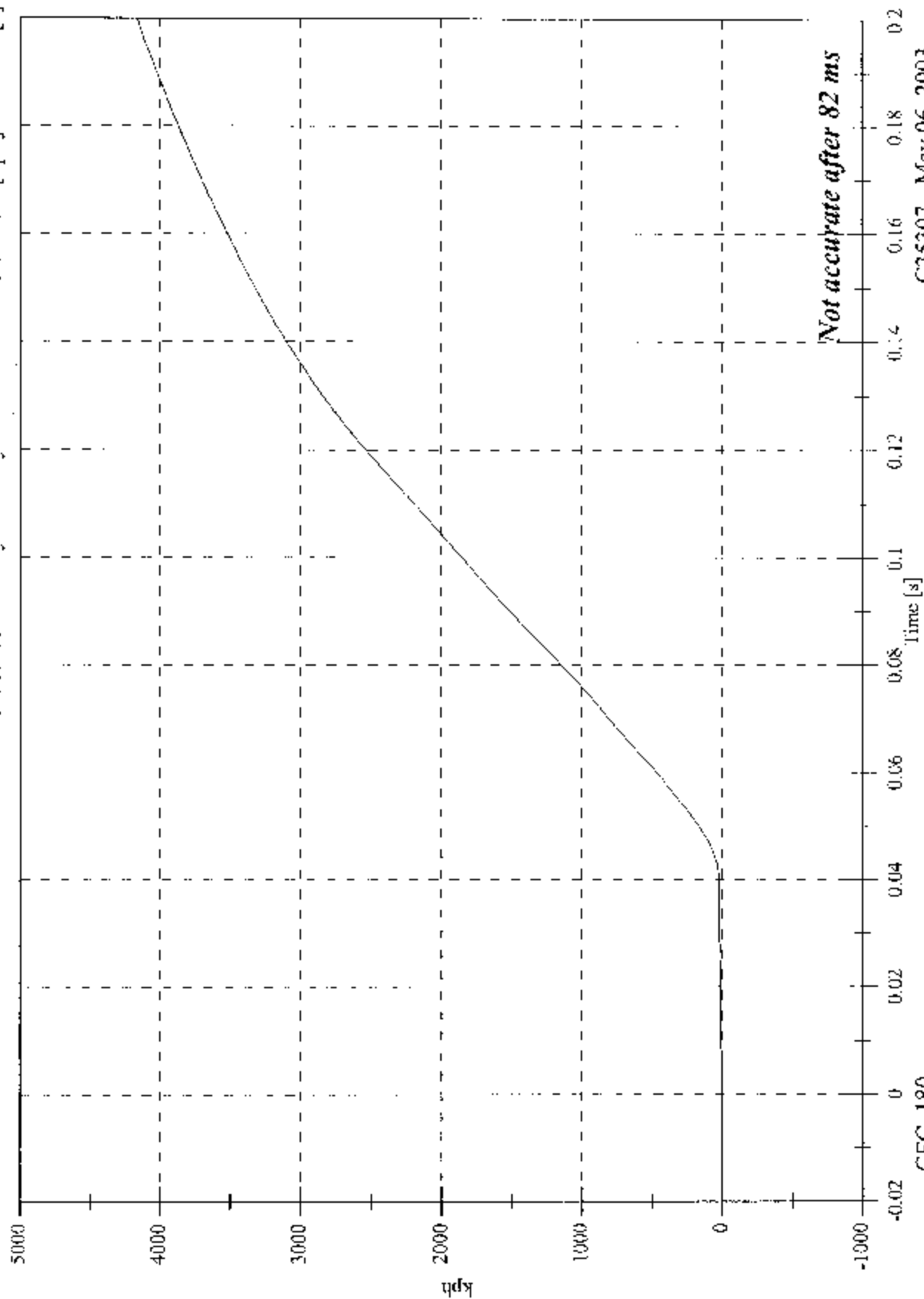
Max: 1069.9 [g] at 0.085 [s]
Min: -1.0 [g] at -0.001 [s]



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Max: 4157.2 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.007 [s]

V2 A5 Left Front Sill y Velocity



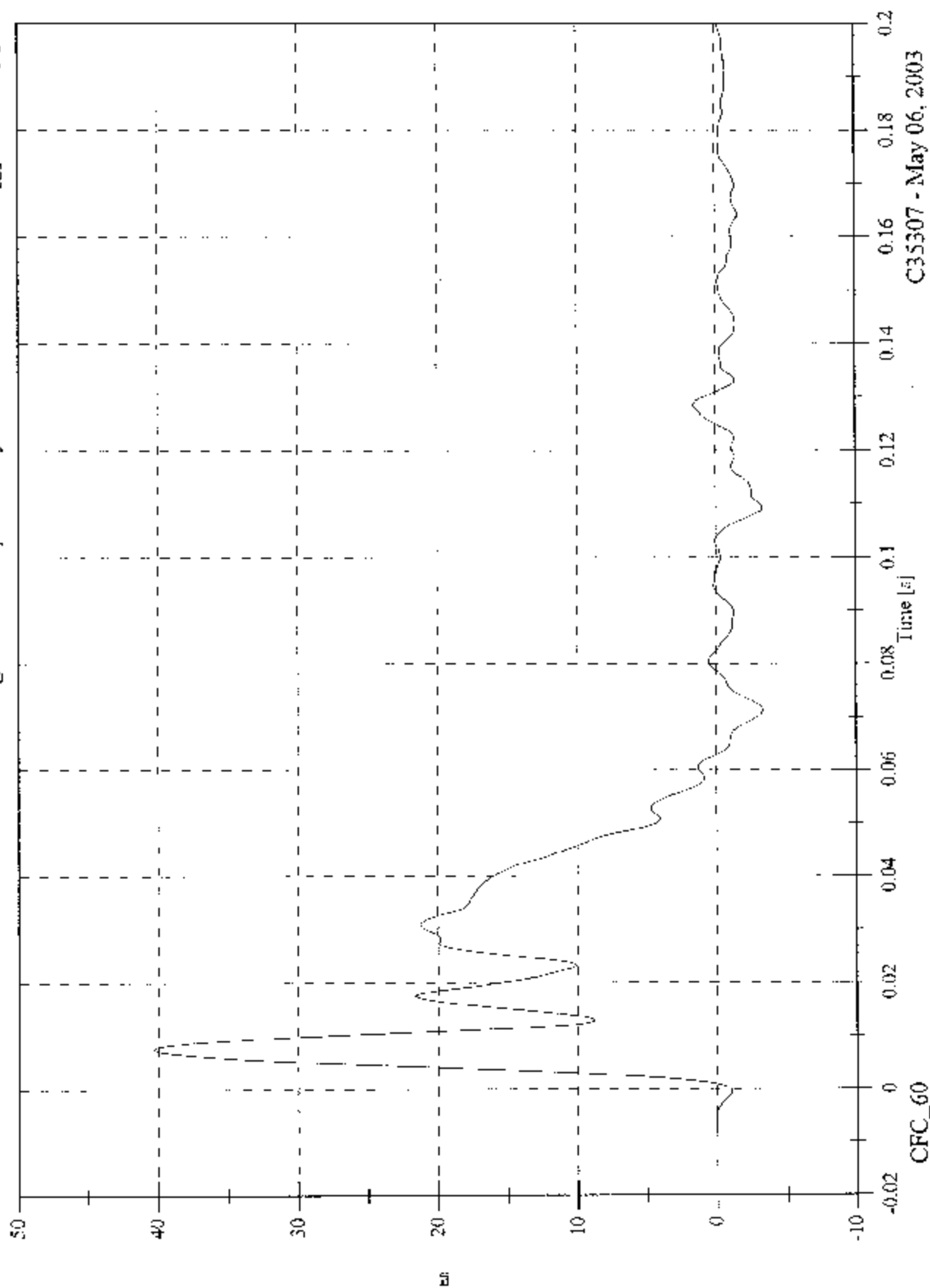
Not accurate after 82 ms

C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2 A7 Right Rear Compartment y

Max: 40.3 [g] at 0.008 [s]
Min: -3.3 [g] at 0.109 [s]

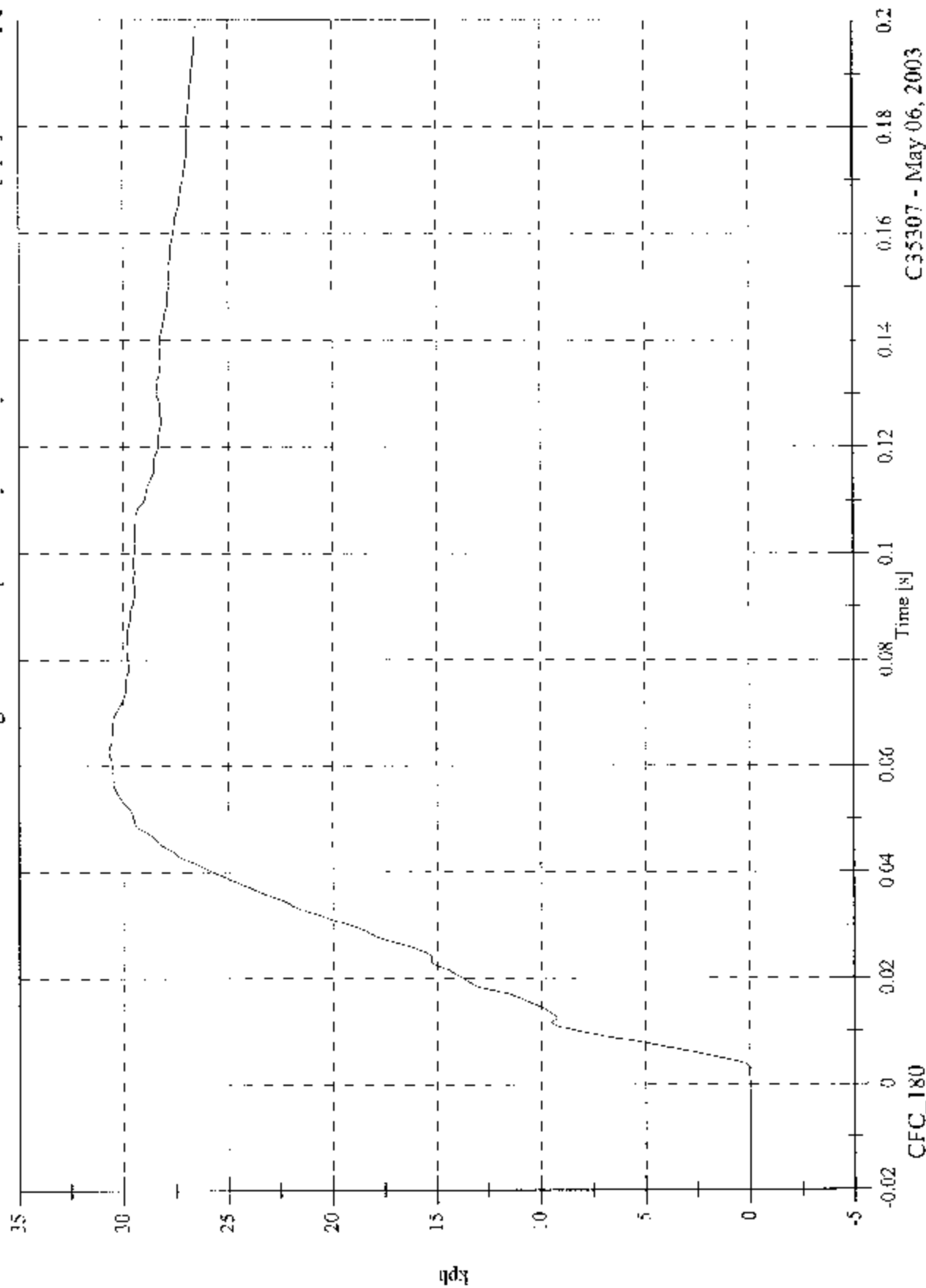


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V2 A7 Right Rear Compartment y Velocity

Max: 30.7 [kph] at 0.063 [s]
Min: -0.0 [kph] at -0.016 [s]



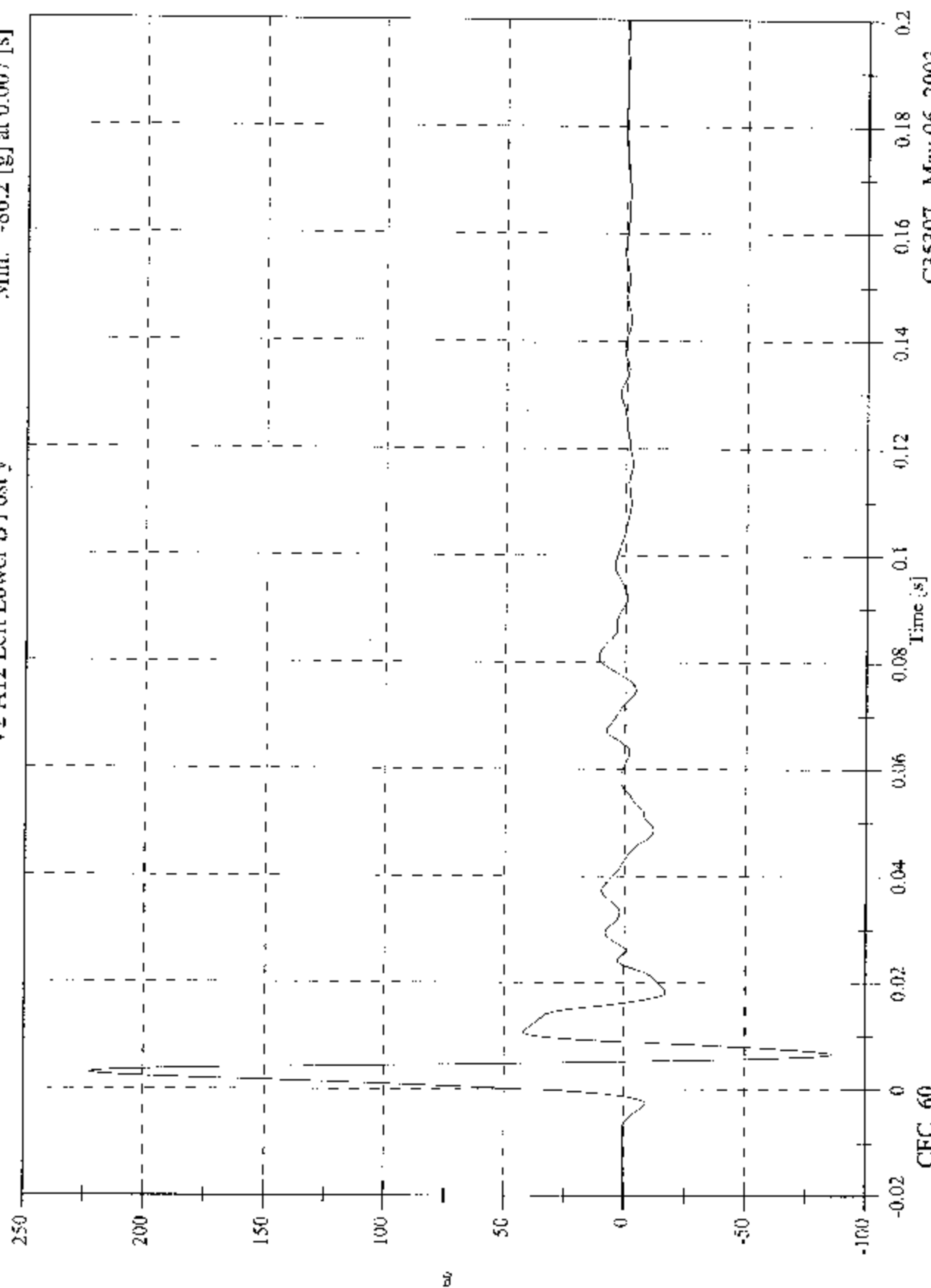
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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A12 Left Lower B Post y

Max: 222.3 [g] at 0.003 [s]

Min: -86.2 [g] at 0.007 [s]

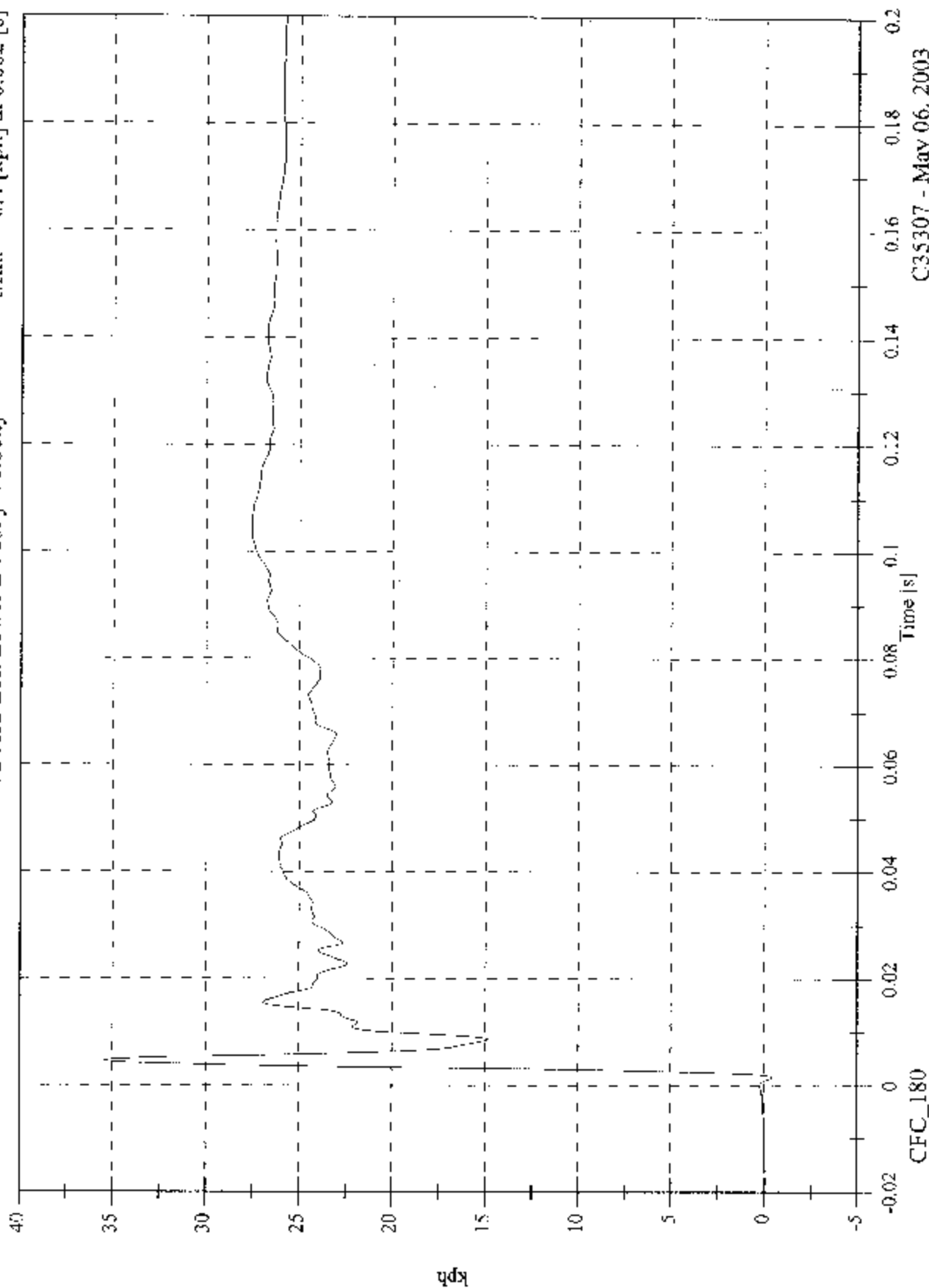


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Max: 35.4 [kph] at 0.005 [s]
 Min: -0.4 [kph] at 0.002 [s]

V2 A12 Left Lower B Post y Velocity

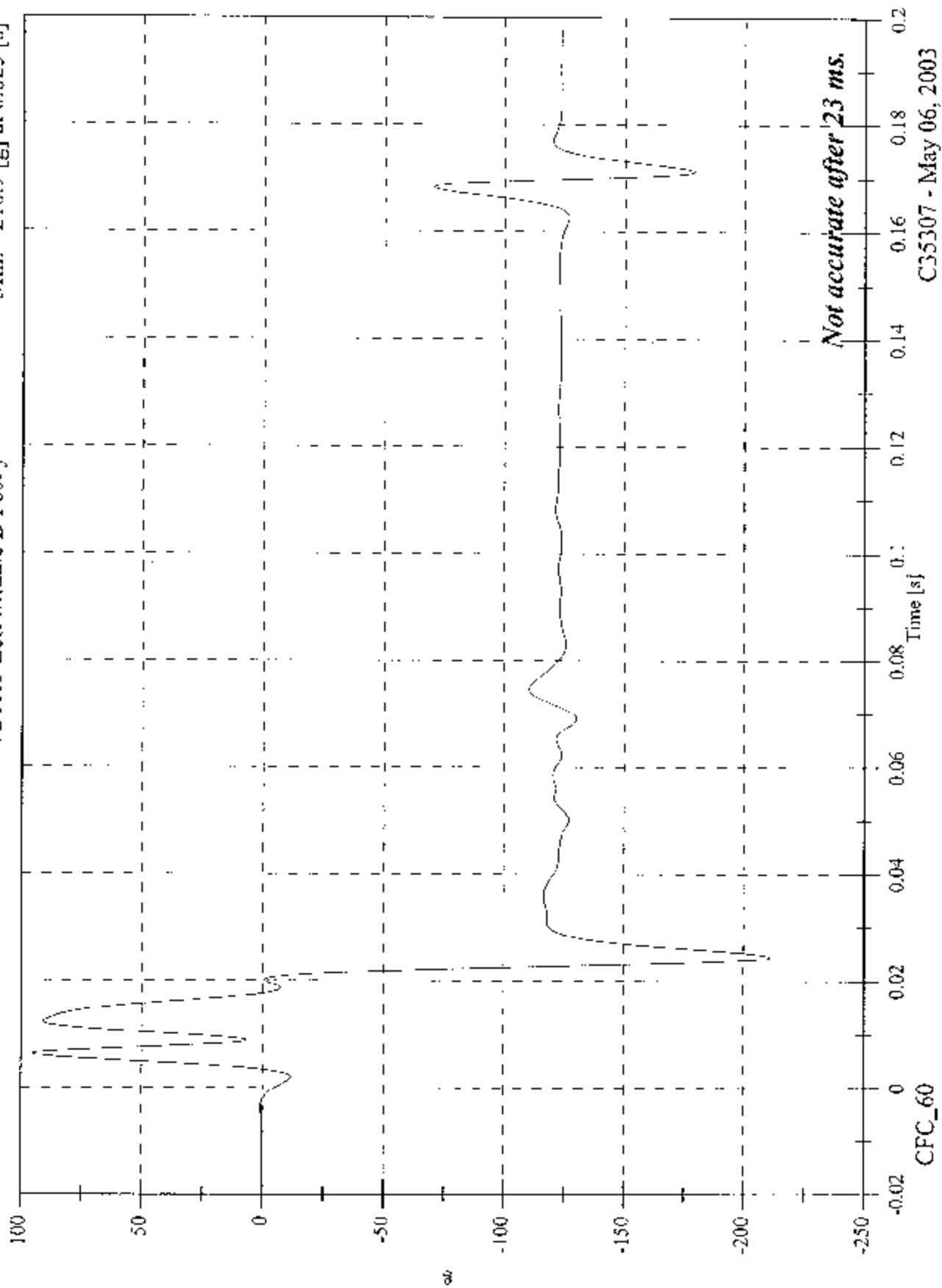


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A13 Left Middle B Post y

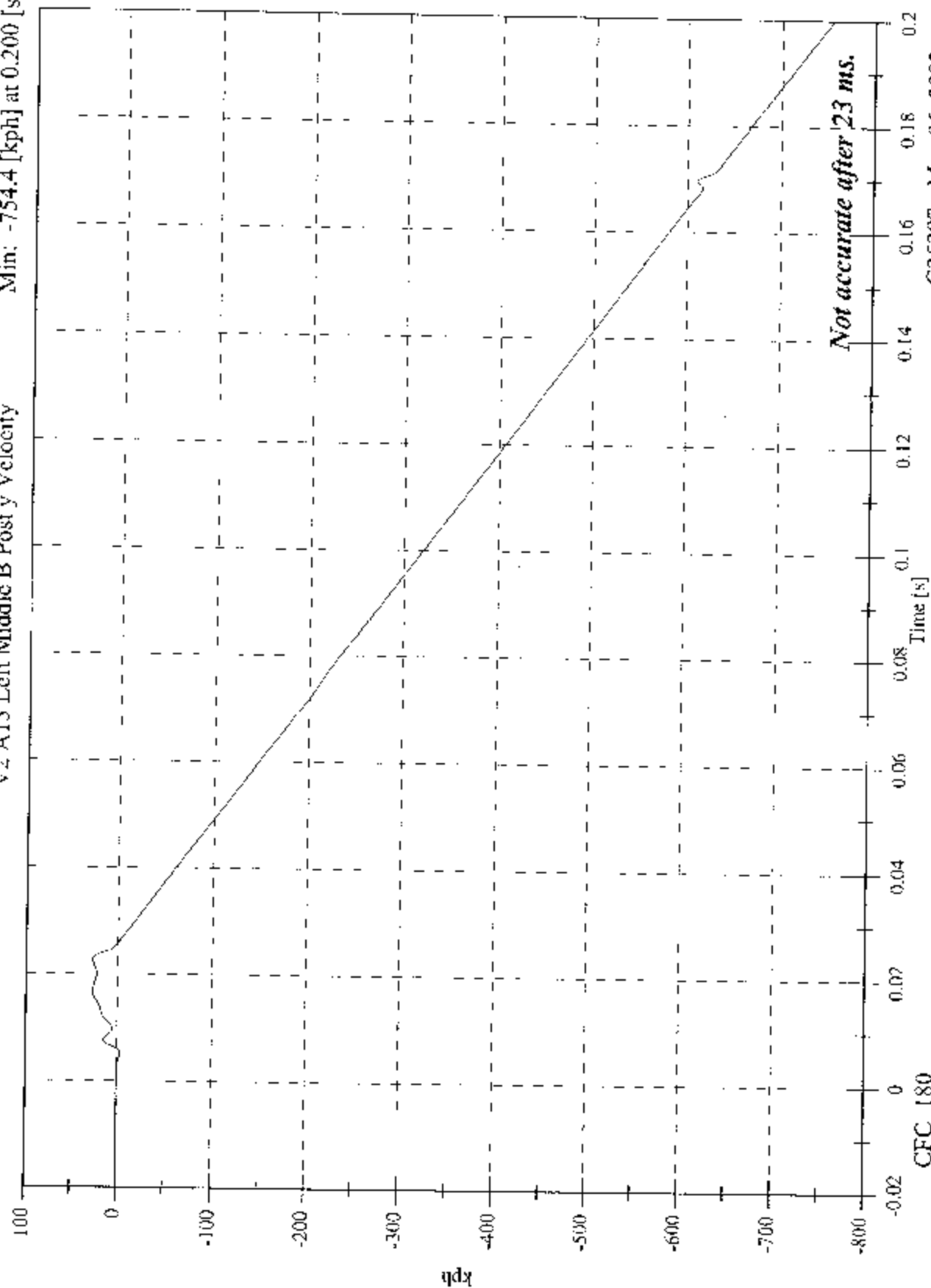
Max: 95.3 [g] at 0.006 [s]
Min: -210.9 [g] at 0.025 [s]



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V2 A13 Left Middle B Post y Velocity

Max: 27.3 [kph] at 0.023 [s]
Min: -754.4 [kph] at 0.200 [s]

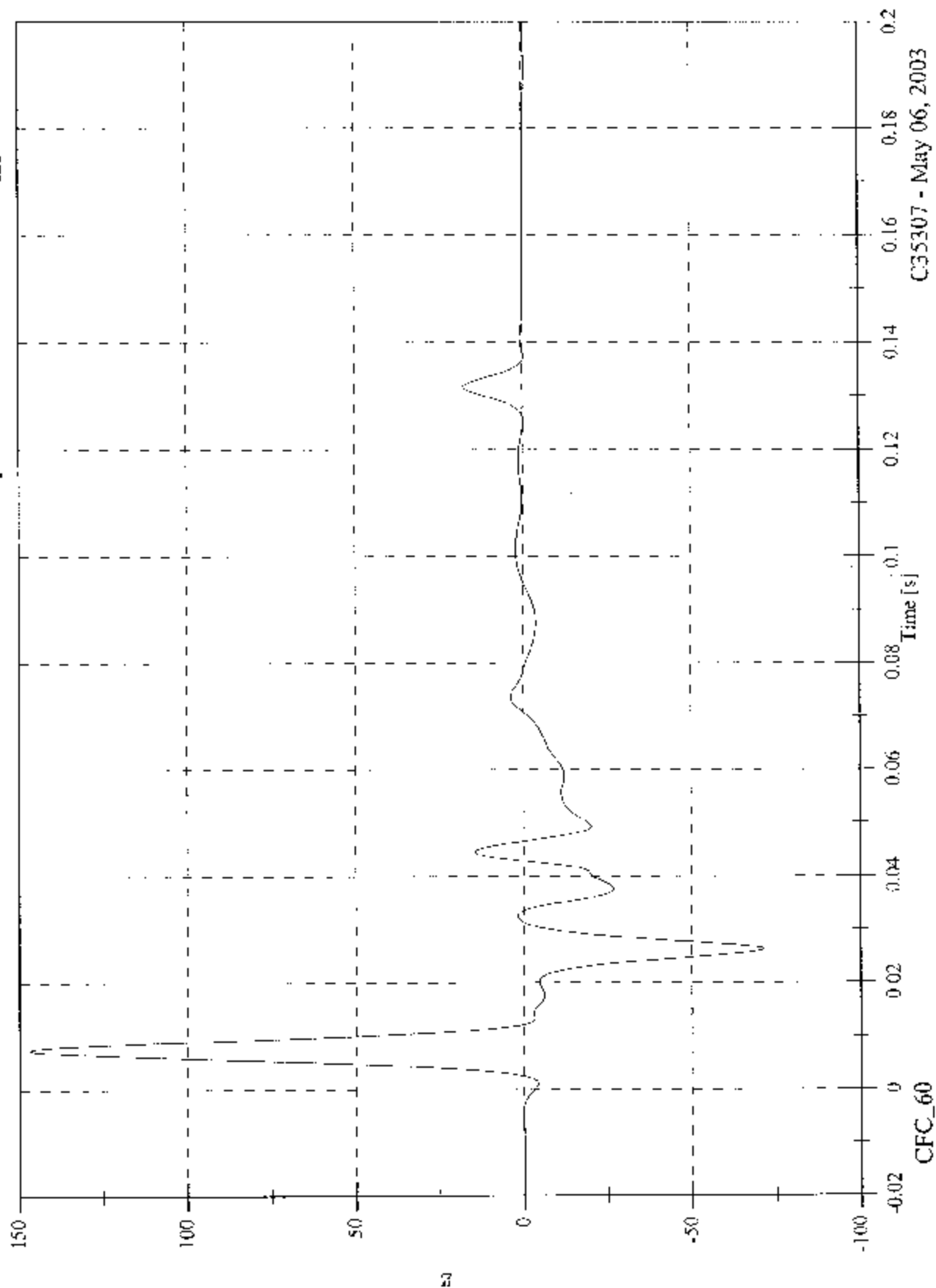


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A14 Left Lower A Post y

Max: 147.1 [g] at 0.007 [s]
Min: -71.3 [g] at 0.026 [s]

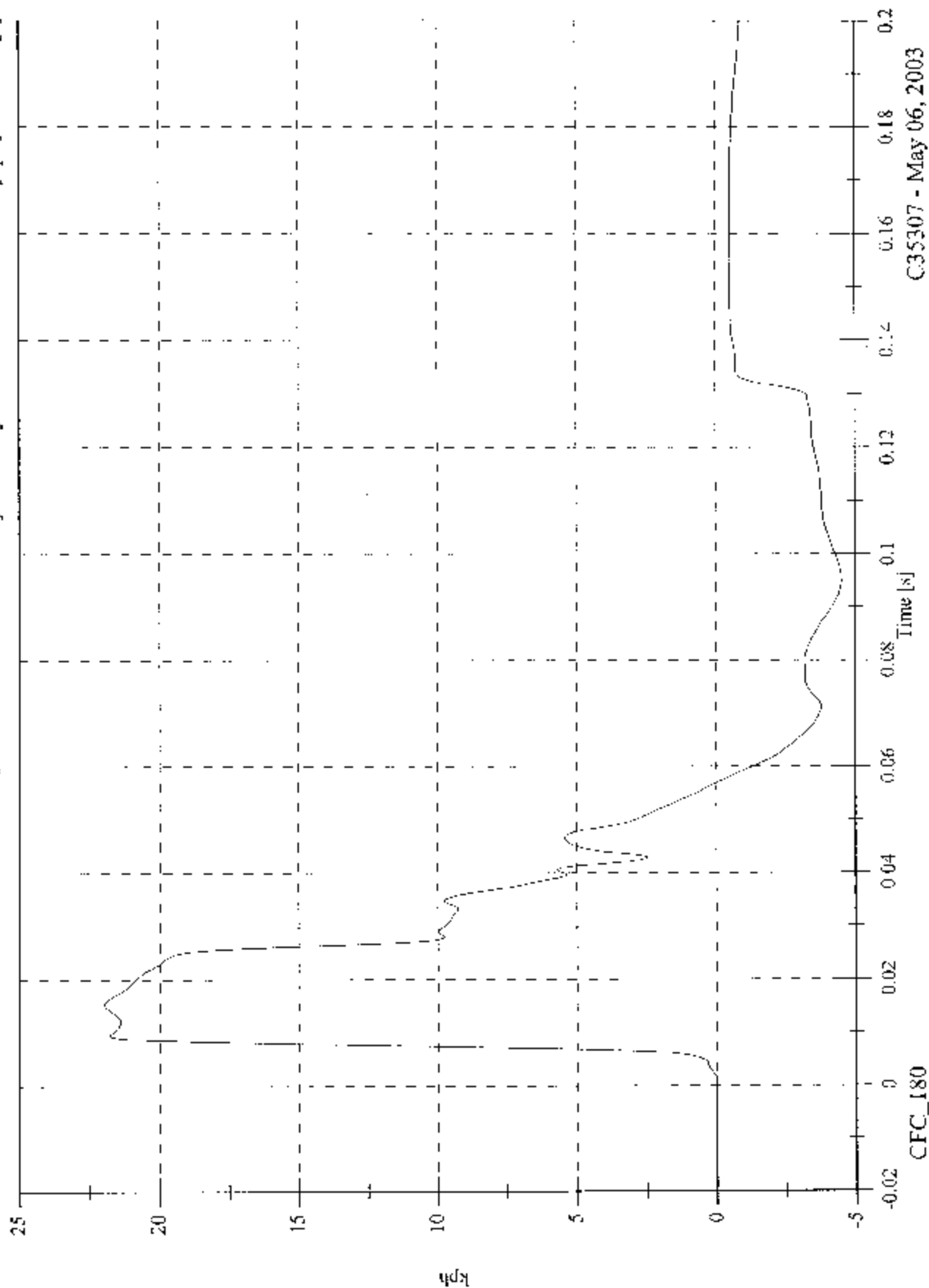


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 22.0 [kph] at 0.015 [s]
 Min: -4.5 [kph] at 0.095 [s]

V2 A14 Left Lower A Post y Velocity

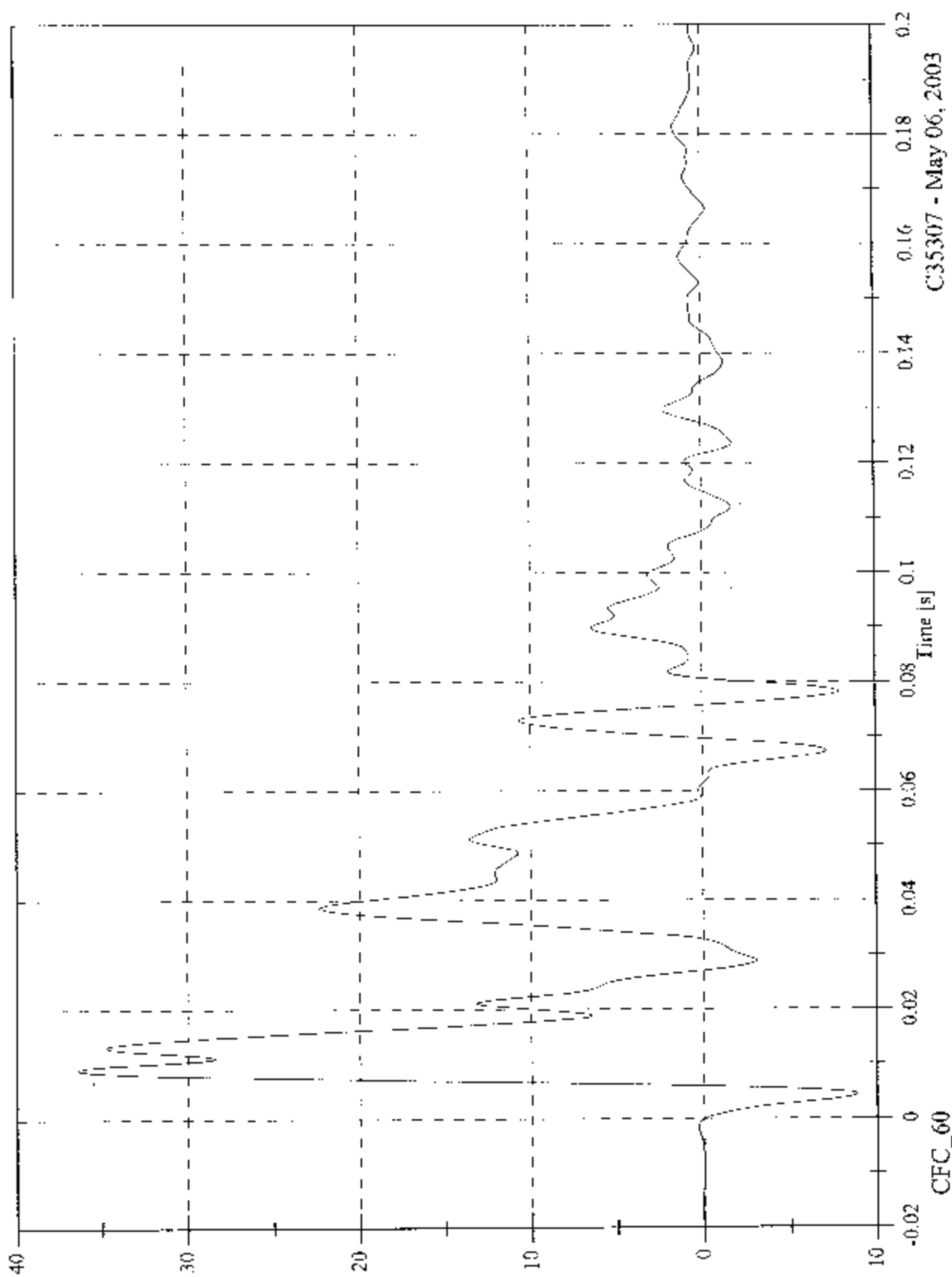


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2 A15 Left Mid A Post y

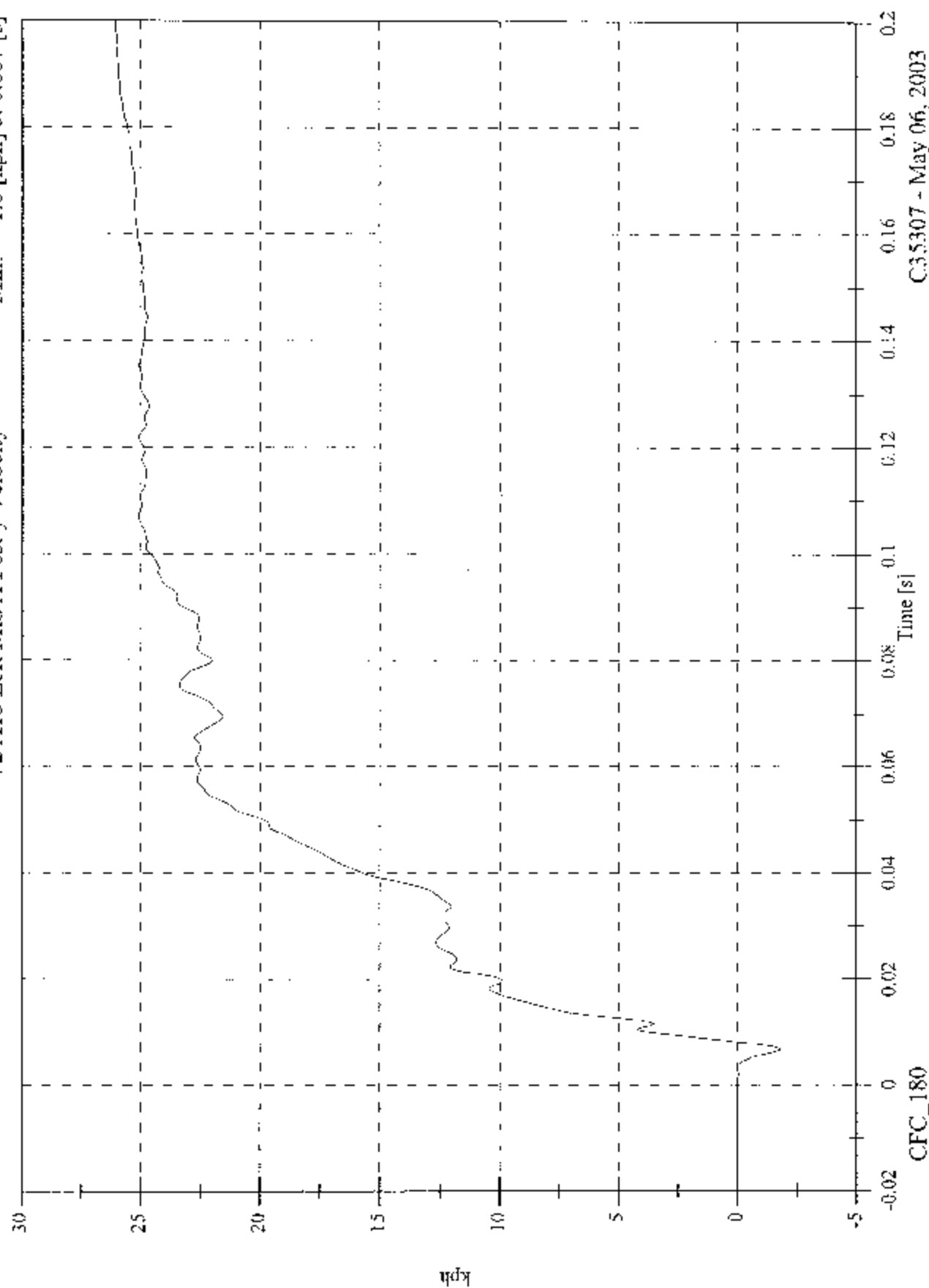
Max: 36.4 [g] at 0.009 [s]
Min: -8.9 [g] at 0.004 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

V2 A15 Left Mid A Post y Velocity

Max: 26.1 [kph] at 0.199 [s]
Min: -1.8 [kph] at 0.007 [s]

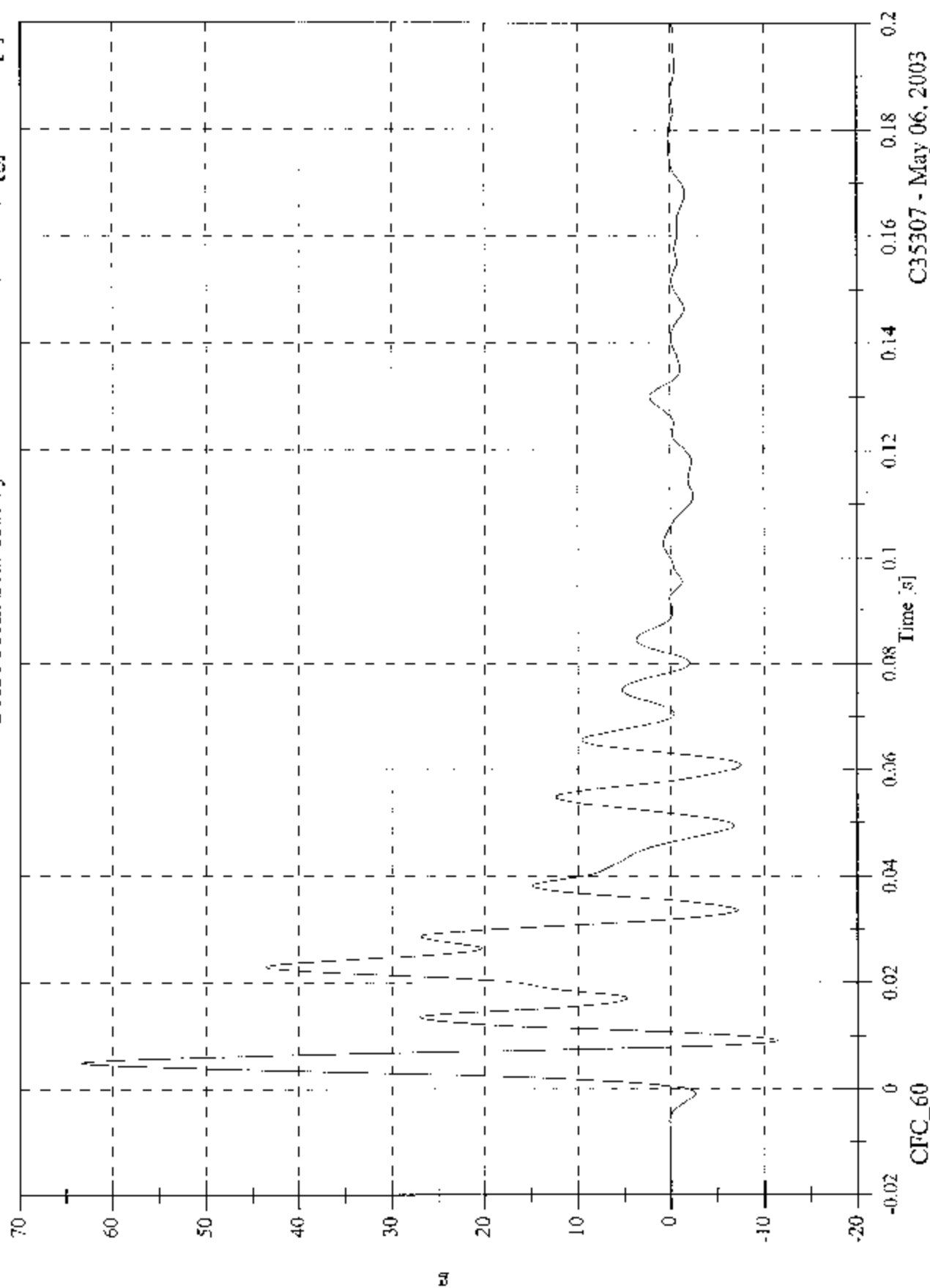


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A16 Front Seat Track y

Max: 63.4 [g] at 0.005 [s]
Min: -11.4 [g] at 0.009 [s]



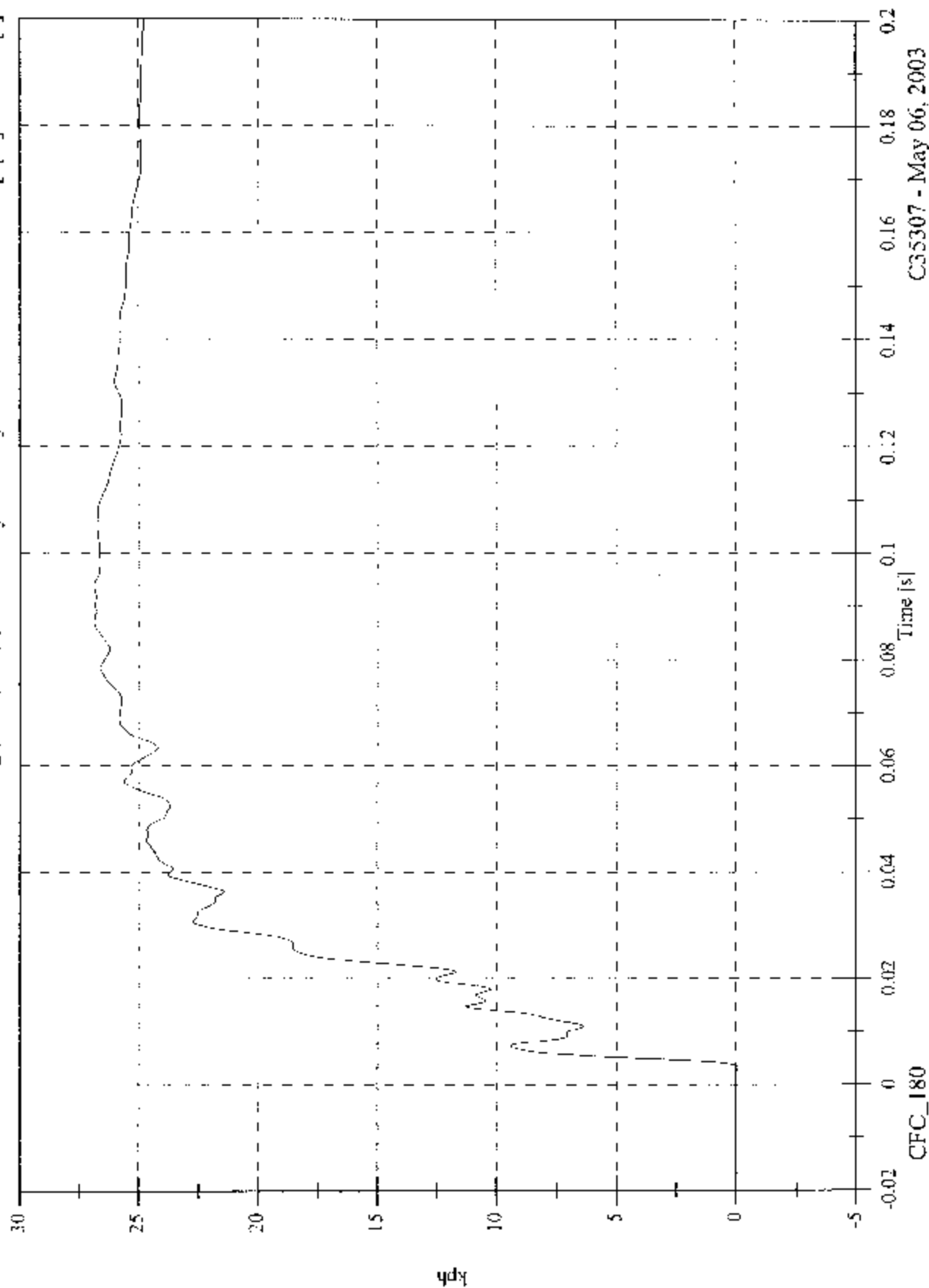
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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 26.9 [kph] at 0.094 [s]

Min: -0.1 [kph] at 0.003 [s]

V2 A16 Front Seat Track y Velocity



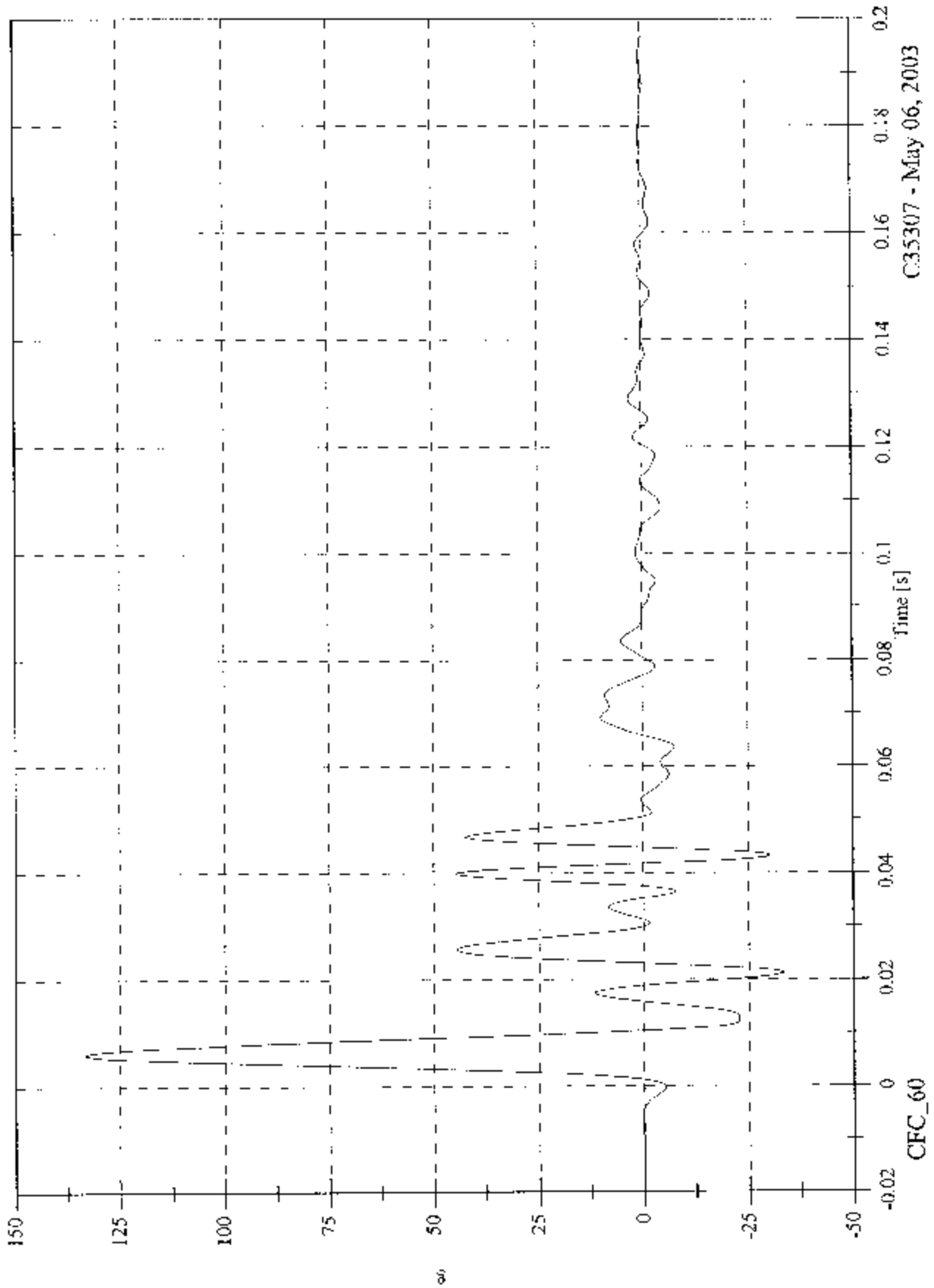
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 133.3 [g] at 0.006 [s]

Min: -33.2 [g] at 0.021 [s]

V2 A17 Rear Seat Track y

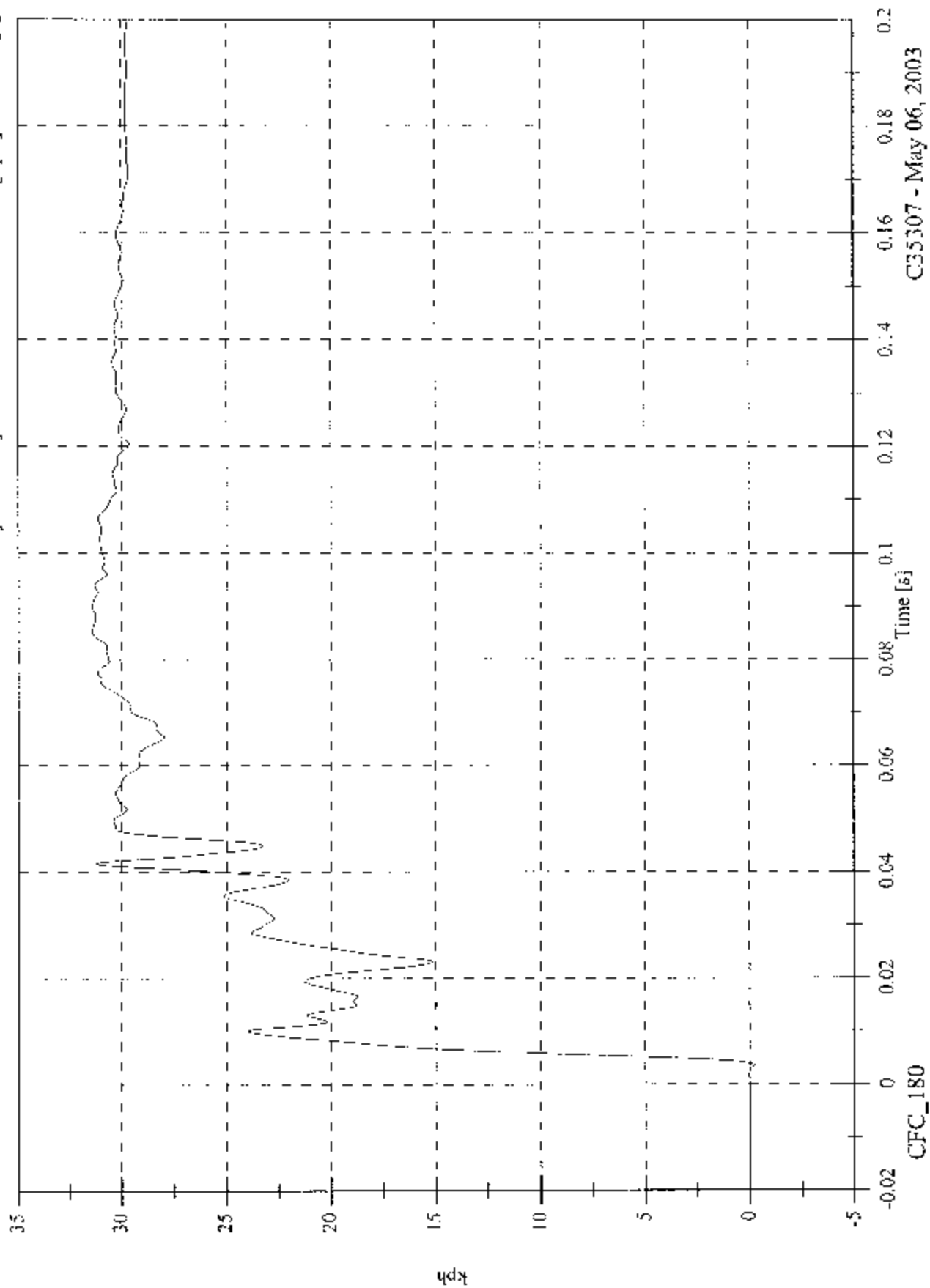


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A17 Rear Seat Track y Velocity

Max: 31.4 [kph] at 0.085 [s]
Min: -0.2 [kph] at 0.003 [s]

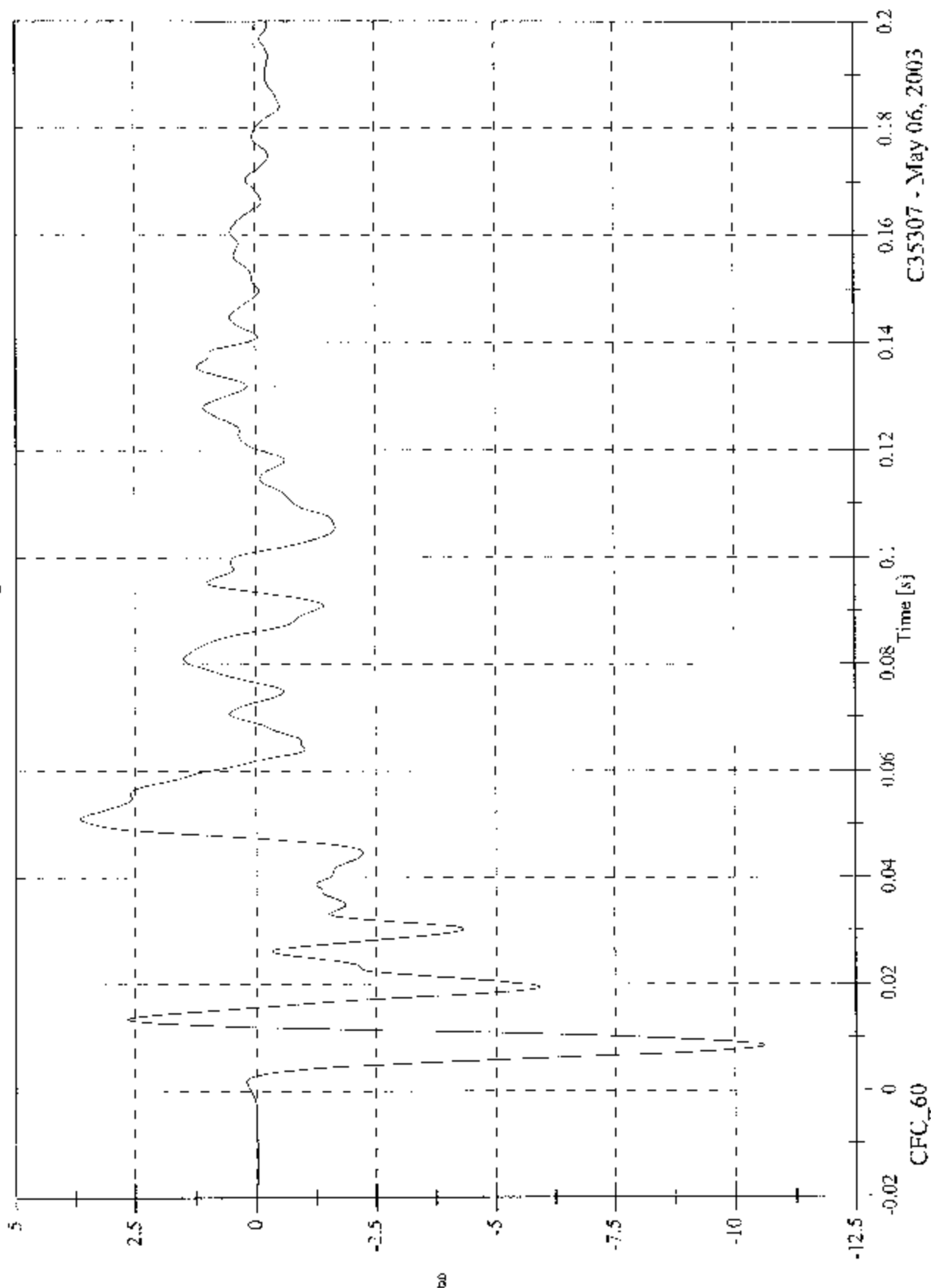


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 3.7 [g] at 0.051 [s]
Min: -10.6 [g] at 0.008 [s]

V2 A18 Target CG x

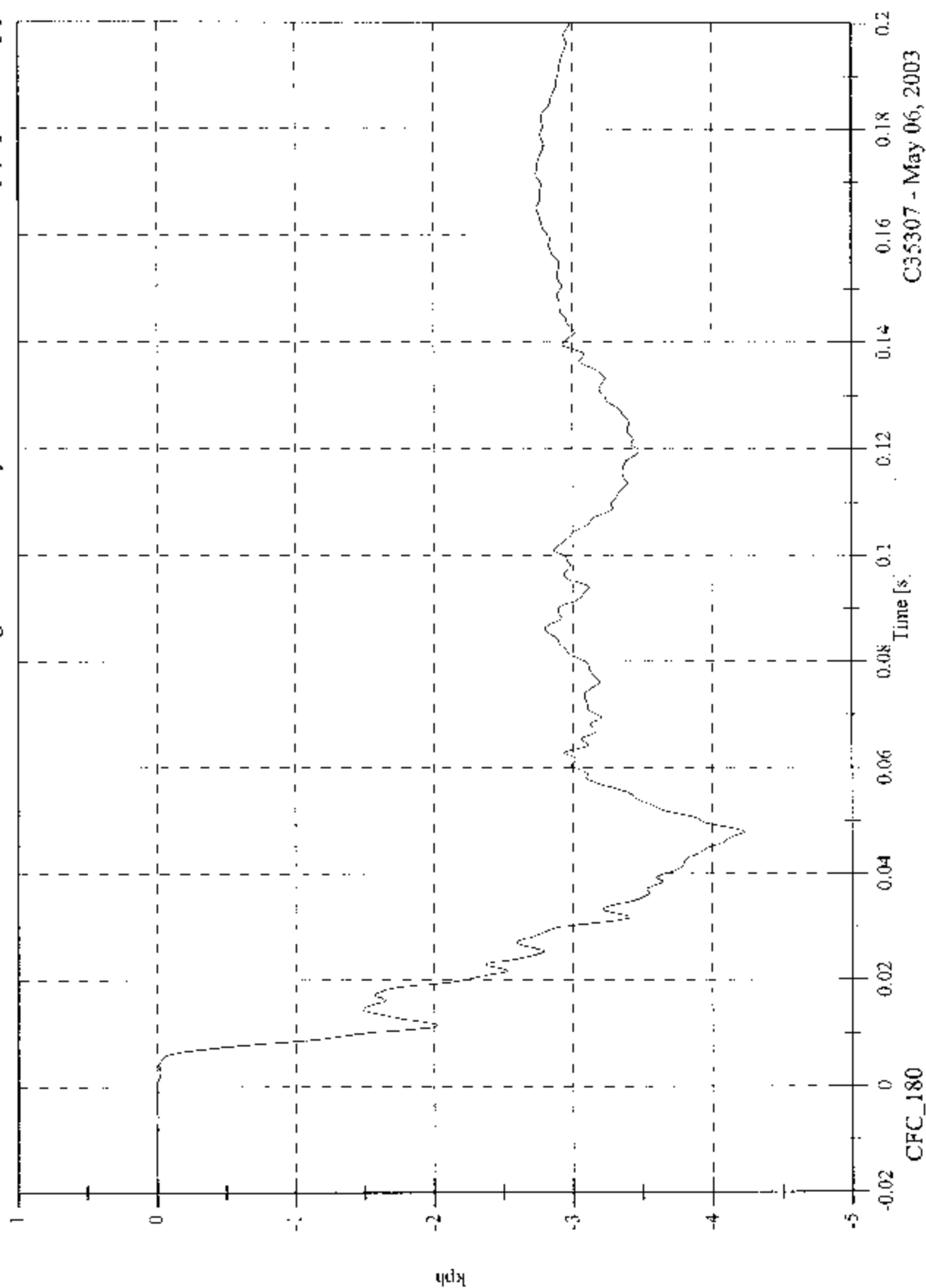


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 0.0 [kph] at -0.018 [s]
Min: -4.2 [kph] at 0.048 [s]

V2 A18 Target CG x Velocity

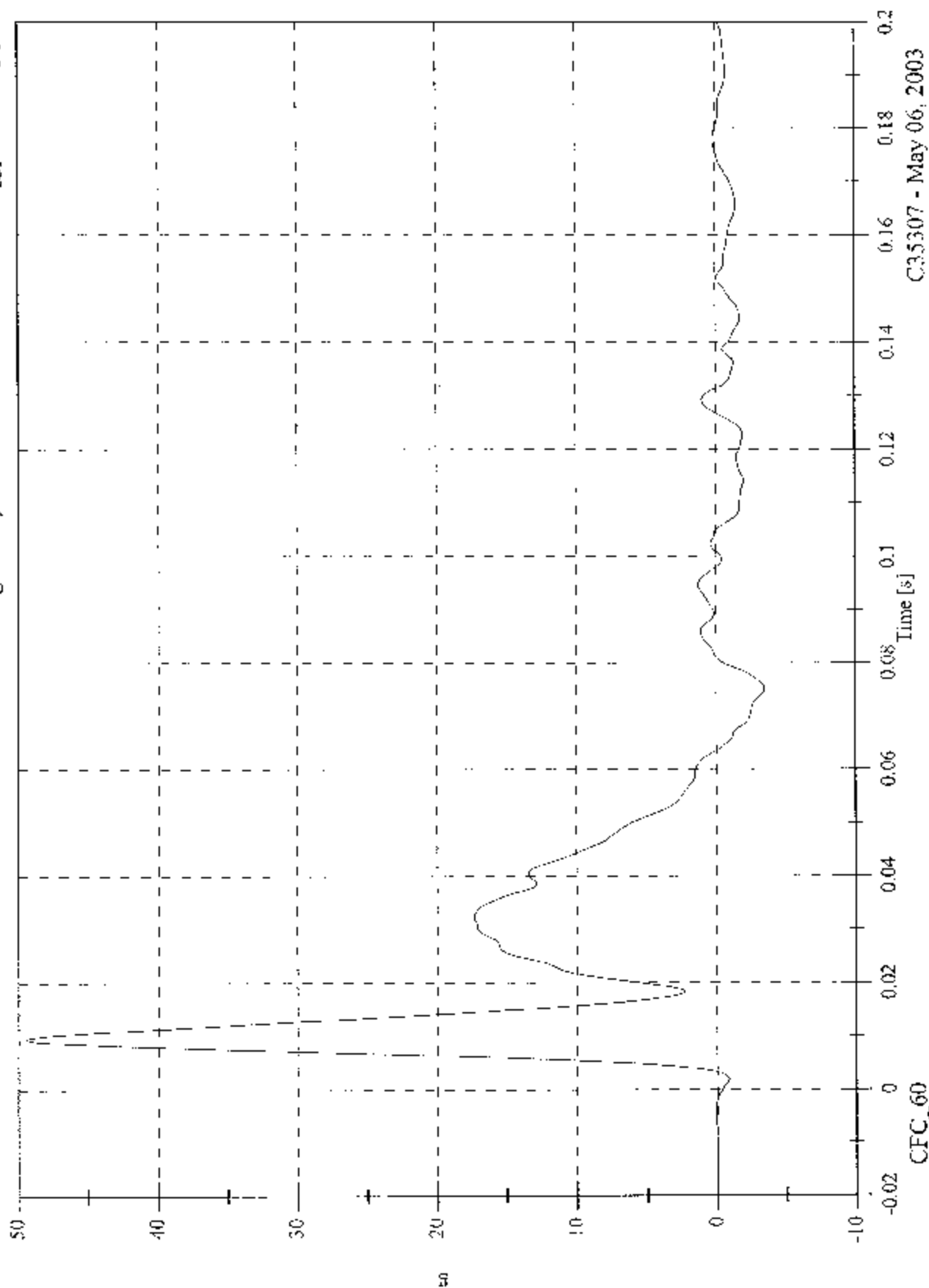


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 49.4 [g] at 0.010 [s]
Min: -3.5 [g] at 0.075 [s]

V2 A18 Target CG y

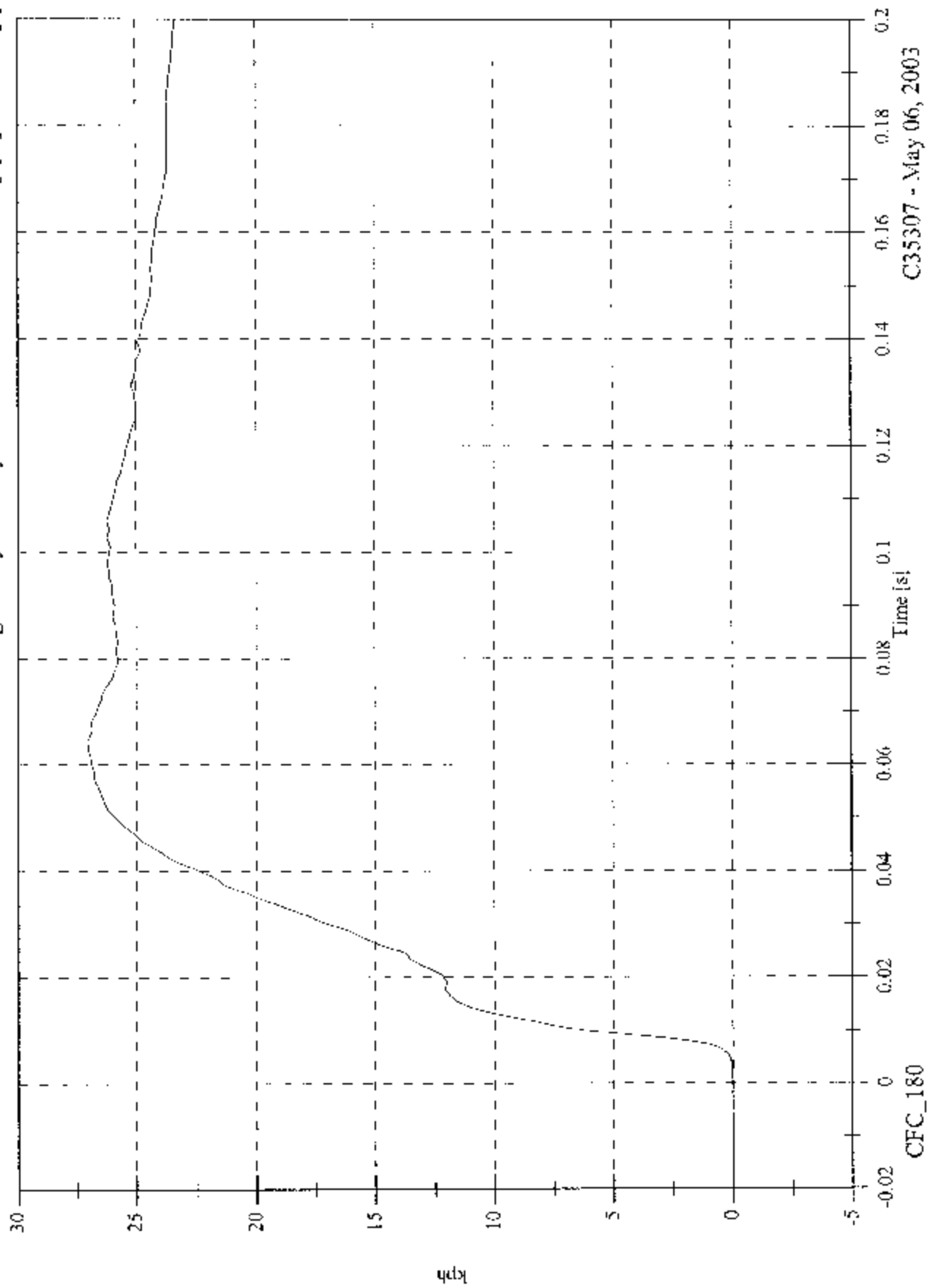


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 27.0 [kph] at 0.063 [s]
 Min: -0.0 [kph] at -0.016 [s]

V2 A18 Target CG y Velocity

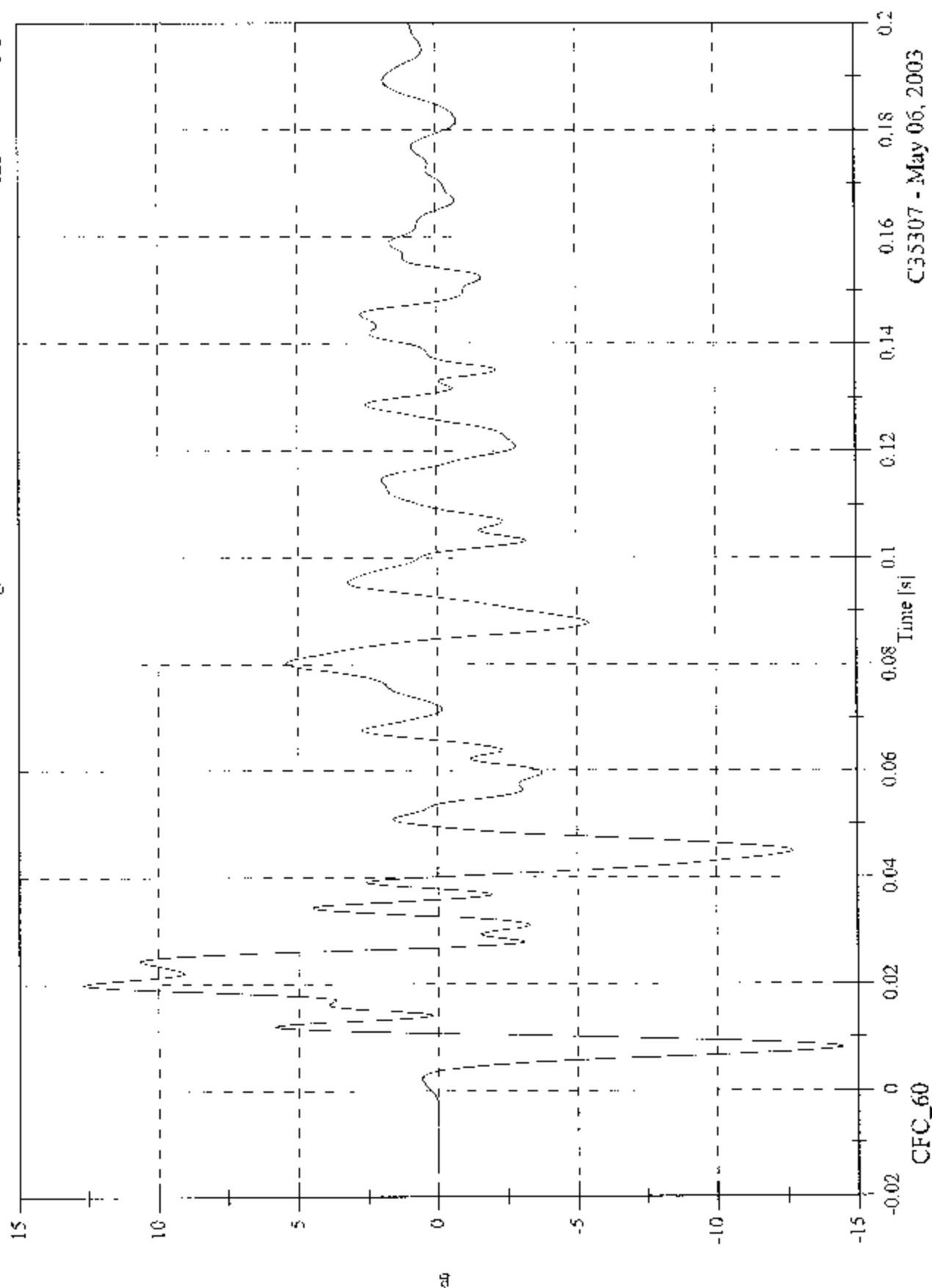


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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A18 Target CG z

Max: 12.7 [g] at 0.020 [s]
Min: -14.5 [g] at 0.008 [s]

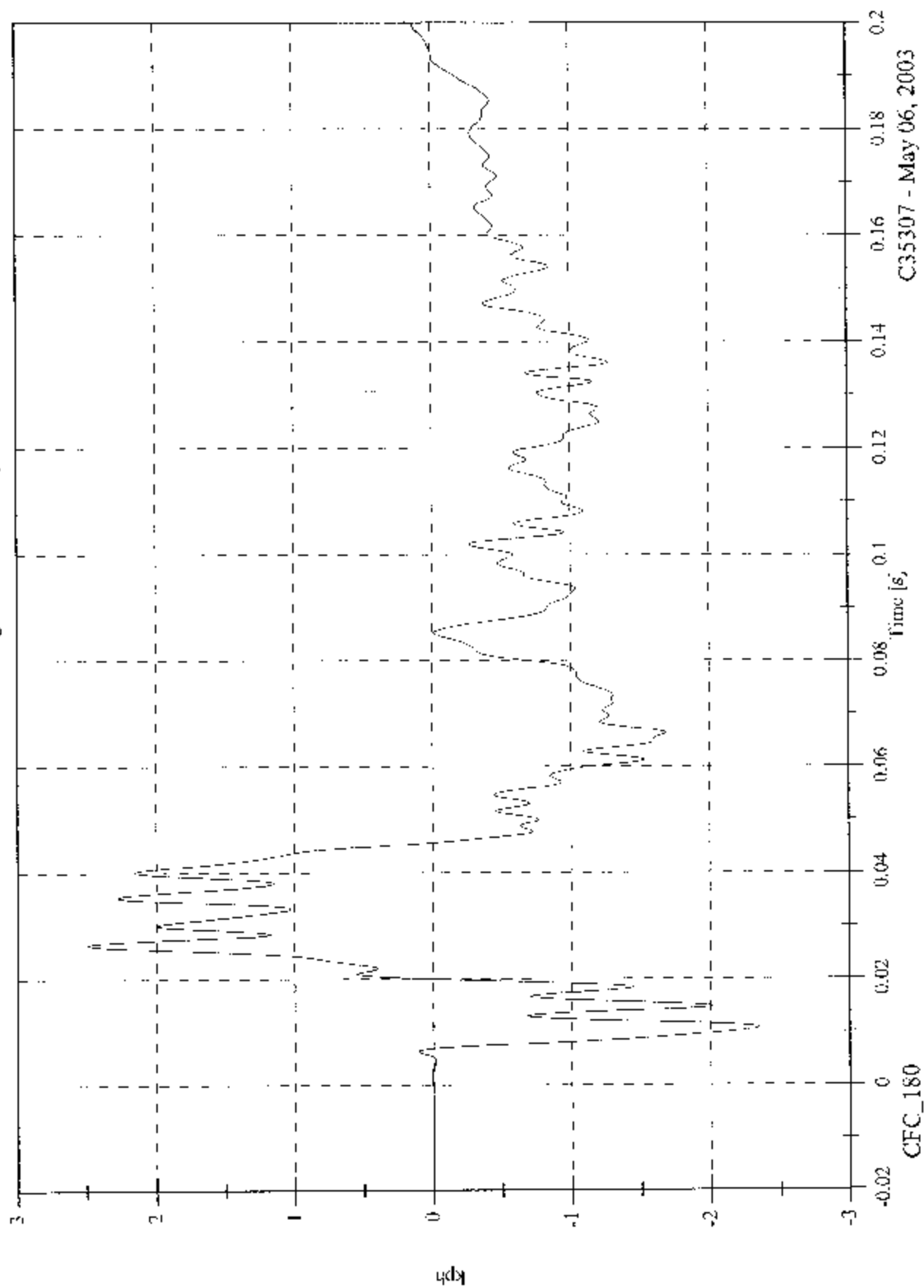


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 2.5 [kph] at 0.026 [s]
Min: -2.3 [kph] at 0.011 [s]

V2 A18 Target CG z Velocity



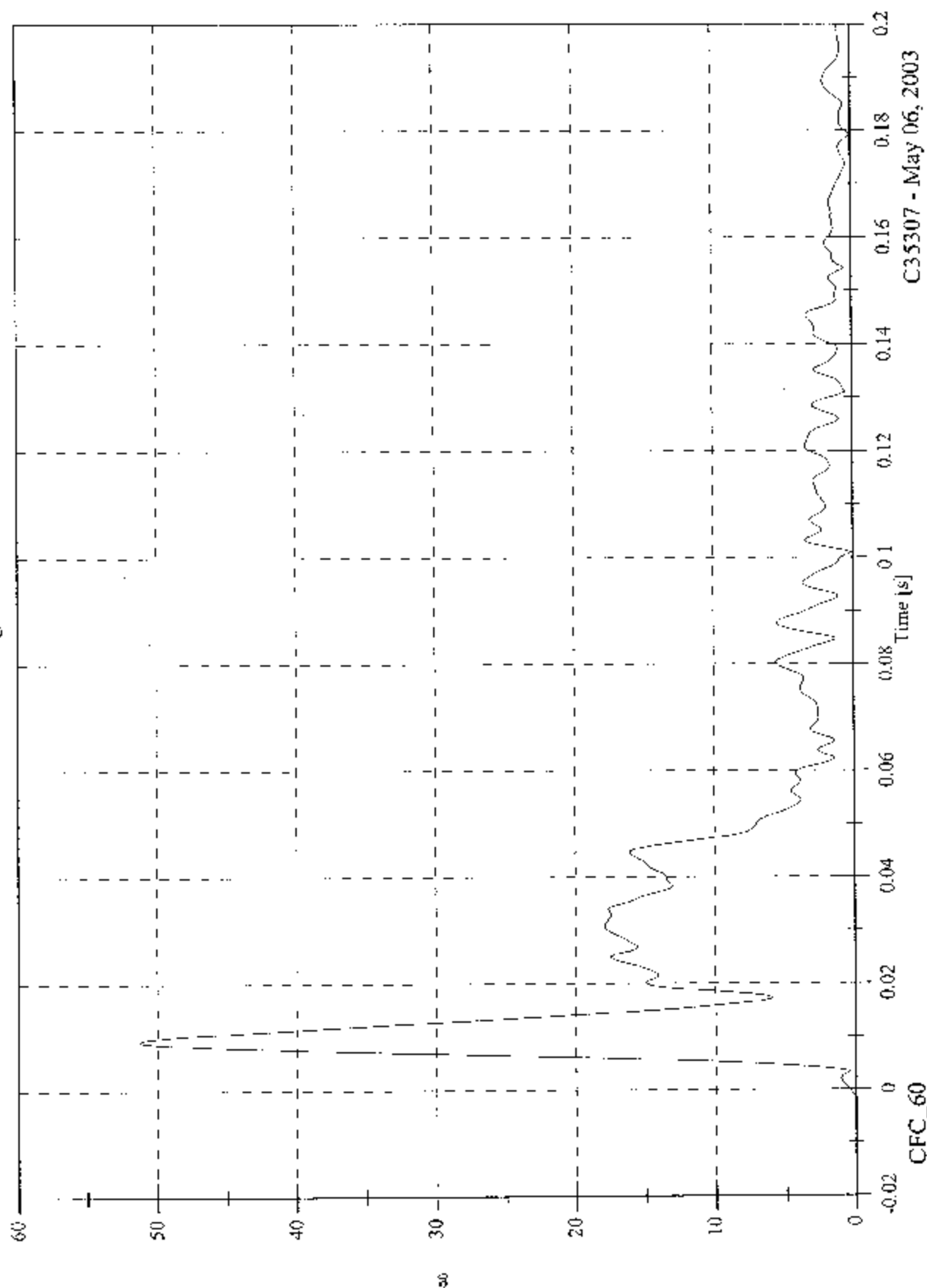
CFC_180

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2003 FMVSS 214D Test 8 2003 Honda Element

V2 A18 Target CG Resultant

Max: 51.3 [g] at 0.009 [s]
Min: 0.0 [g] at -0.020 [s]



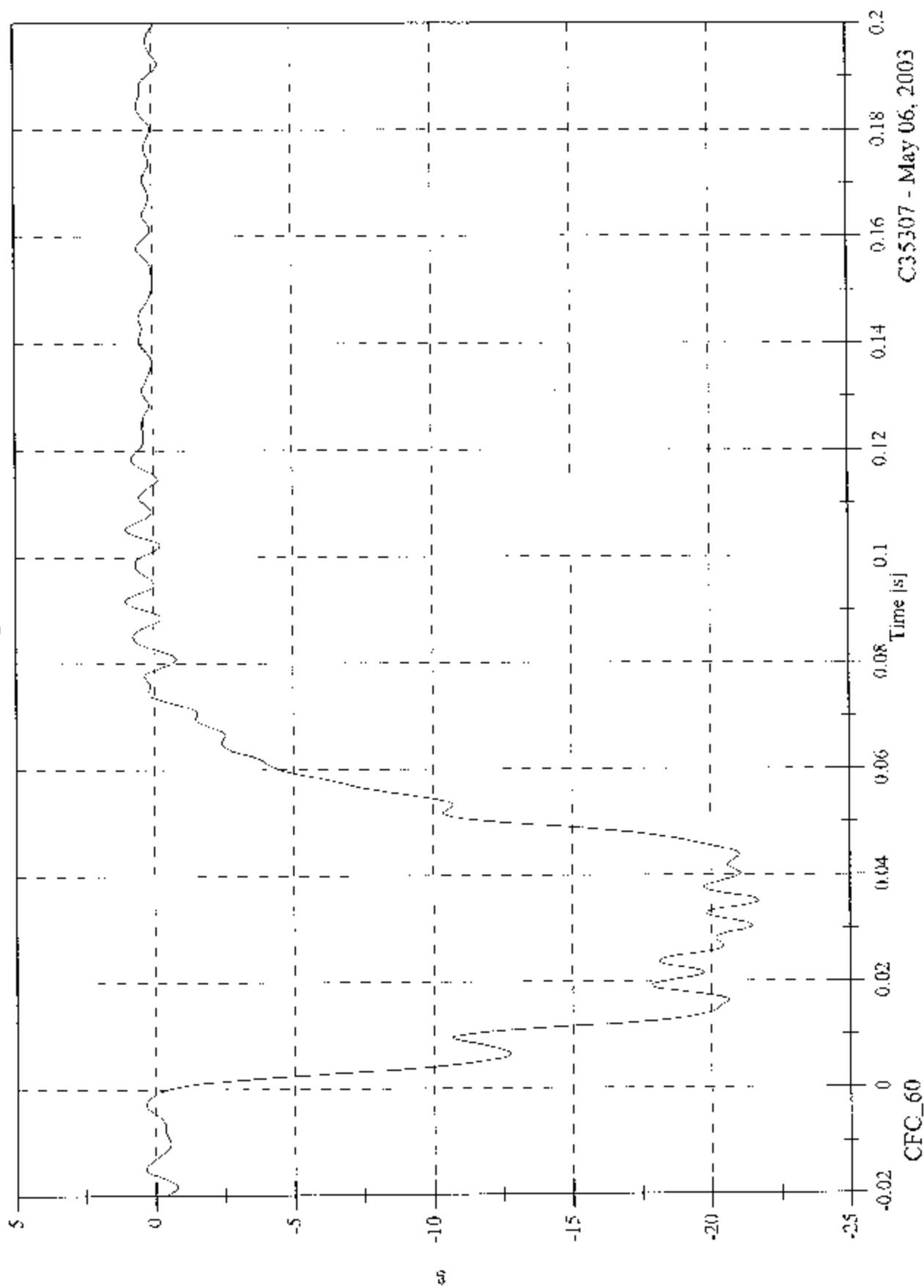
C35307 - May 06, 2003

2003 FM/VSS 214D Test 8 2003 Honda Element

Max: 1.0 [g] at 0.092 [s]

Min: -21.7 [g] at 0.035 [s]

V1 Moving Barrier CG X

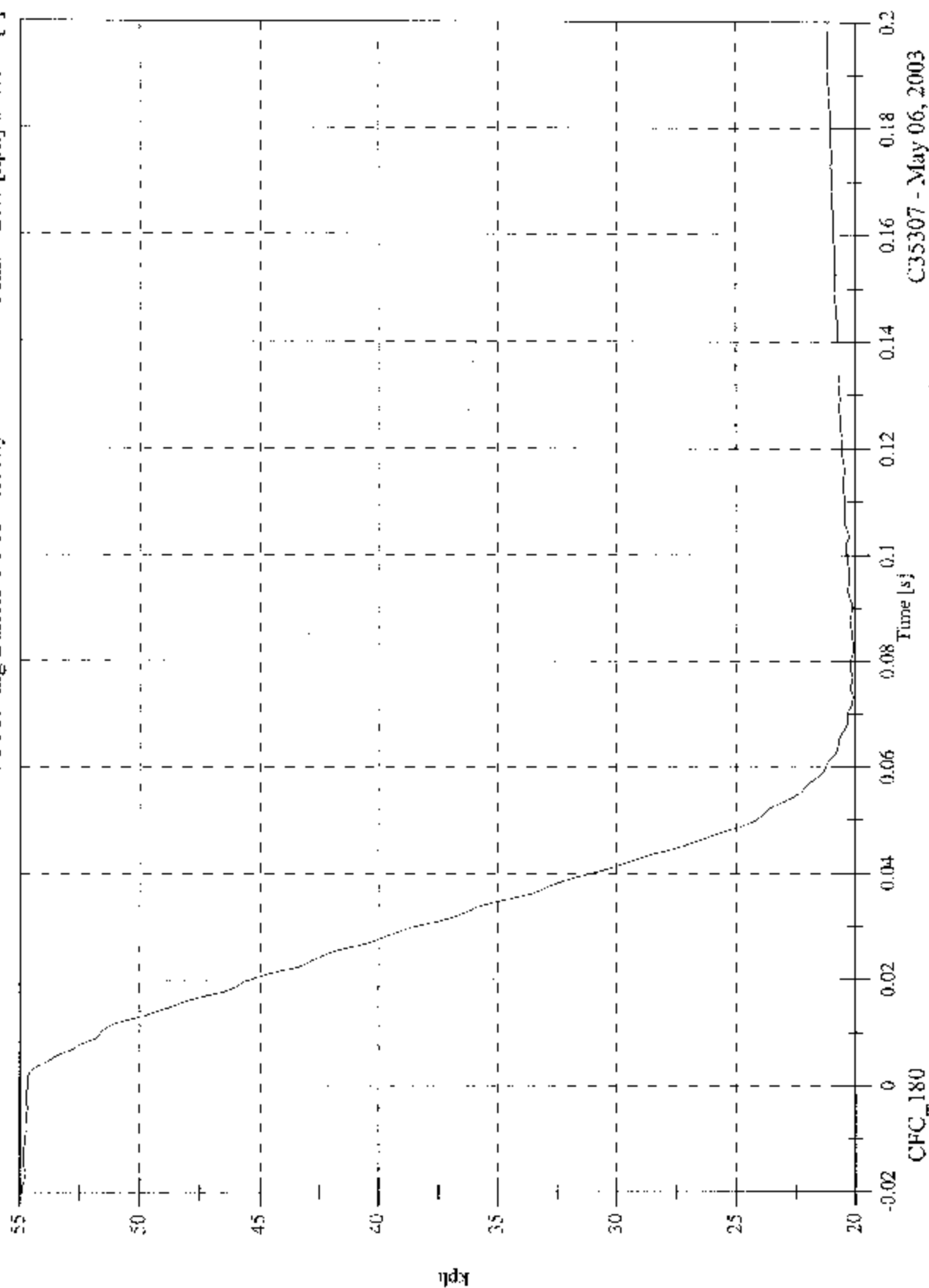


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2003 FMVSS 214D Test 8 2003 Honda Element

VI Moving Barrier CG X Velocity

Max: 54.9 [kph] at -0.020 [s]
Min: 20.0 [kph] at 0.082 [s]



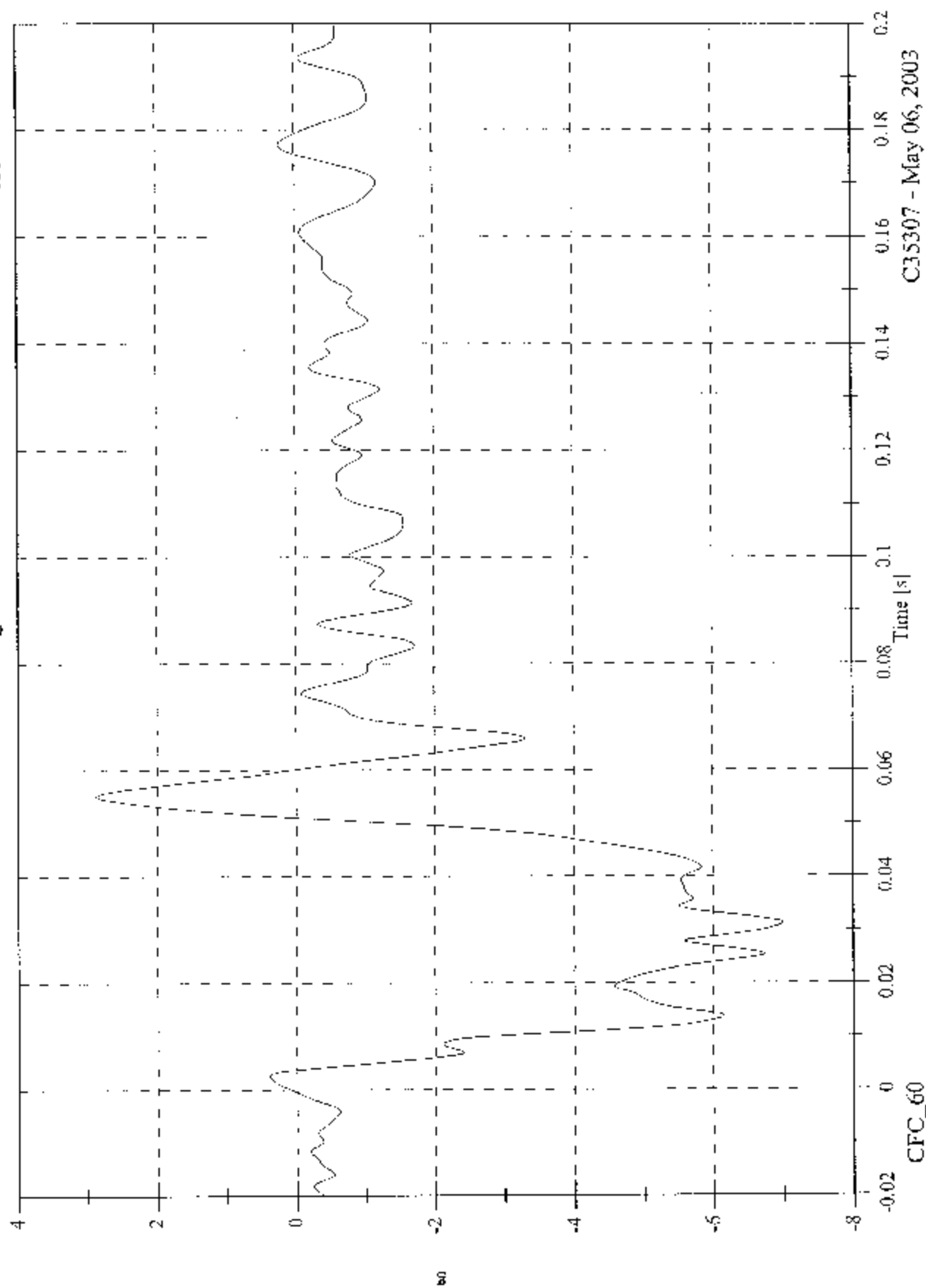
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2003 FMVSS 214D Test 8 2003 Honda Element

VI Moving Barrier CG Y

Max: 2.9 [g] at 0.055 [s]

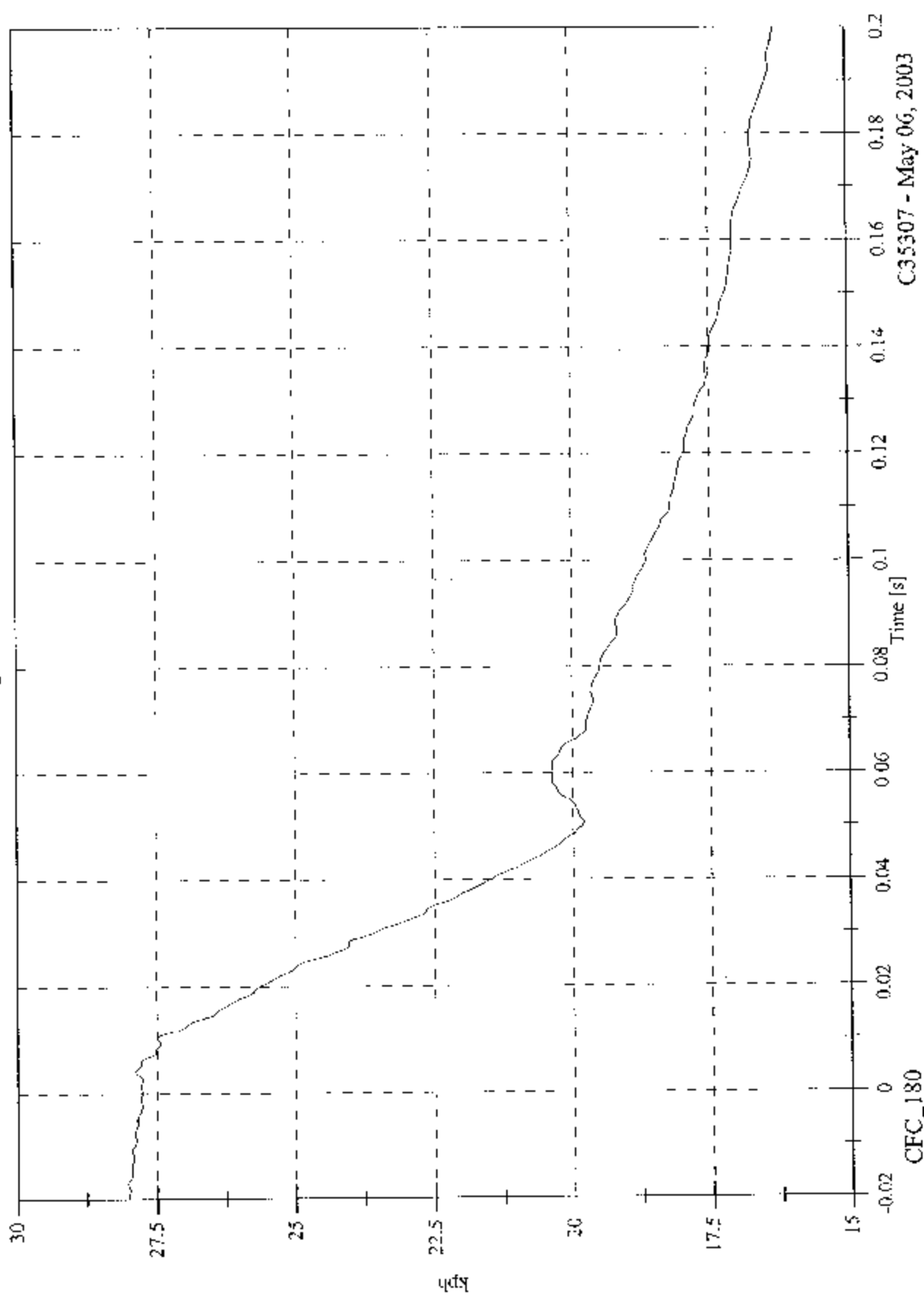
Min: -7.0 [g] at 0.031 [s]



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2003 FMVSS 214D Test 8 2003 Honda Element
 V1 Moving Barrier CG Y Velocity

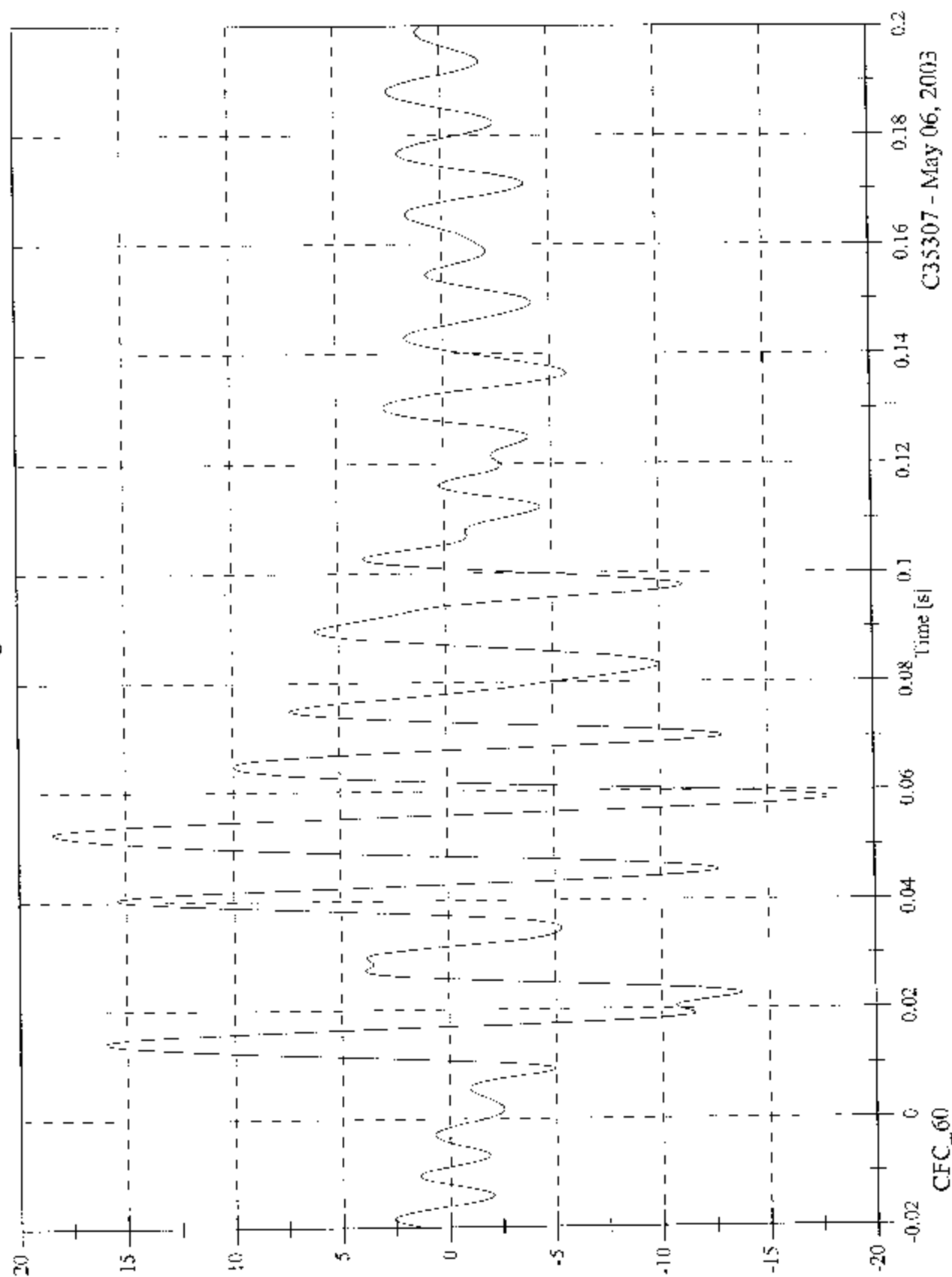
Max: 28.0 [kph] at -0.017 [s]
 Min: 16.3 [kph] at 0.200 [s]



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Max: 18.4 [g] at 0.052 [s]
Min: -17.9 [g] at 0.059 [s]

V1 Moving Barrier CG Z

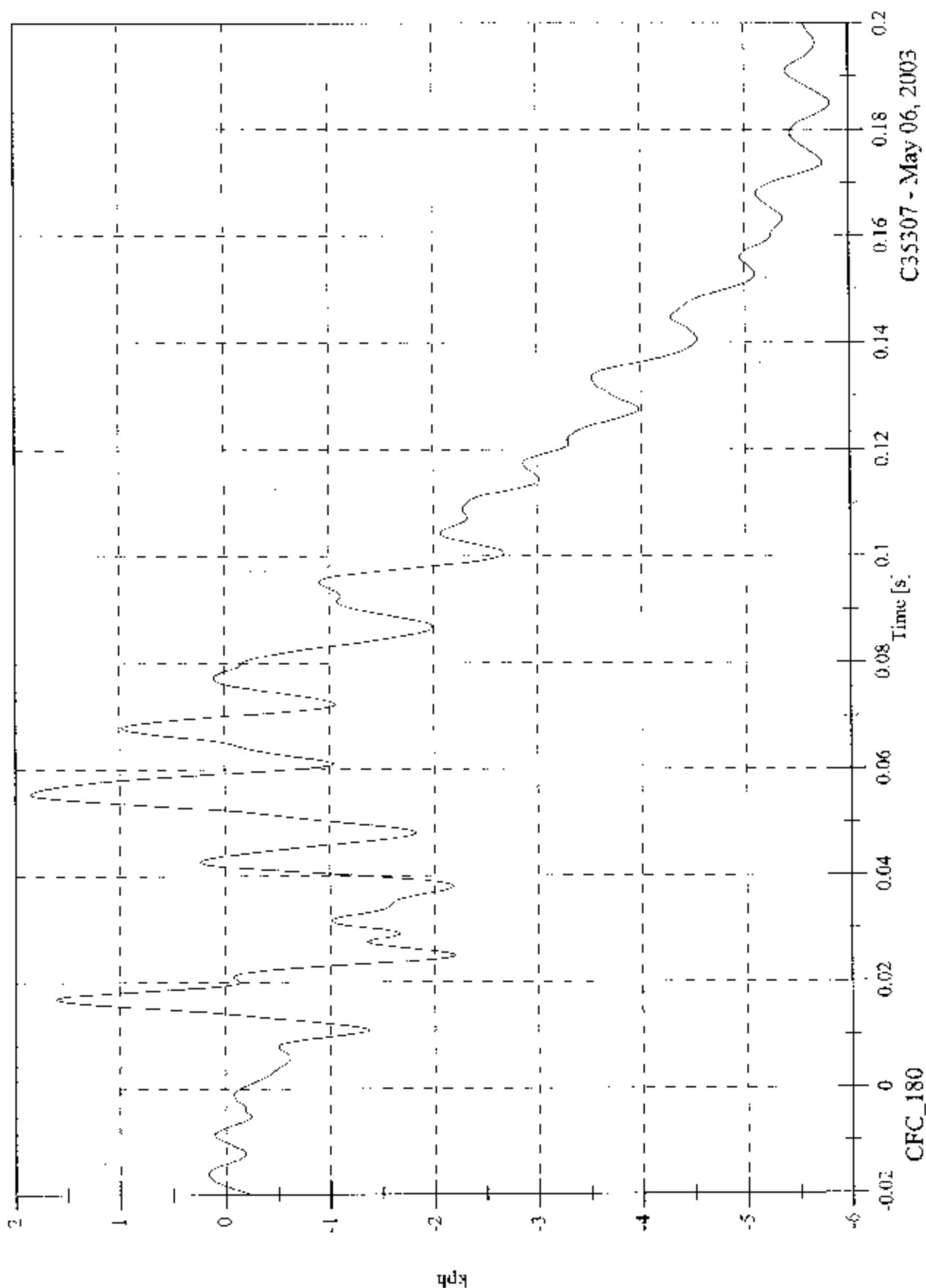


C3S307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 1.9 [kph] at 0.055 [s]
Min: -5.8 [kph] at 0.185 [s]

V1 Moving Barrier CG Z Velocity



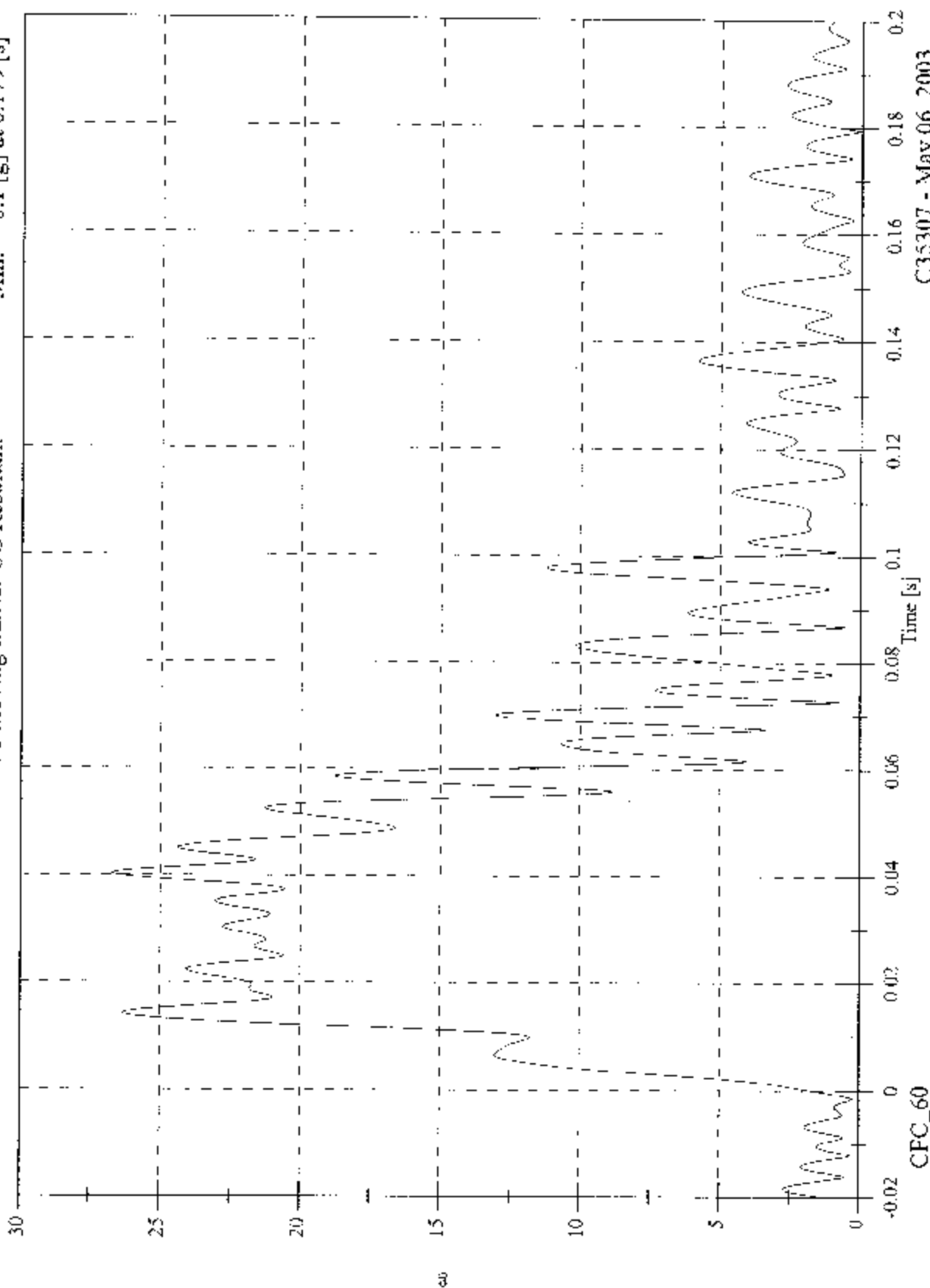
CFC_180

C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V1 Moving Barrier CG Resultant

Max: 26.7 [g] at 0.040 [s]
Min: 0.1 [g] at 0.179 [s]

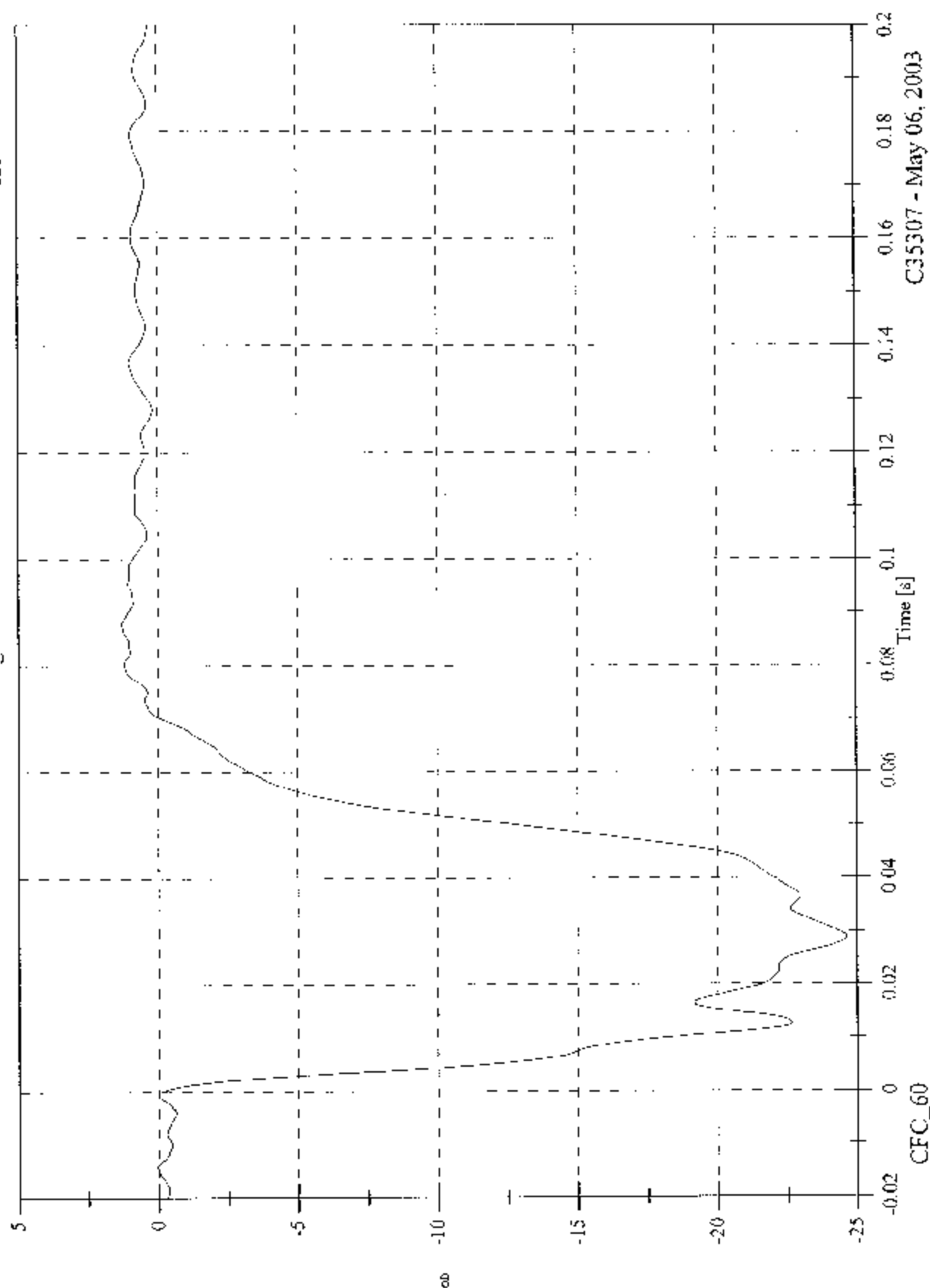


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2003 FMVSS 214D Test 8 2003 Honda Element

VI Moving Barrier Left Rail X

Max: 1.3 [g] at 0.088 [s]
Min: -24.6 [g] at 0.029 [s]

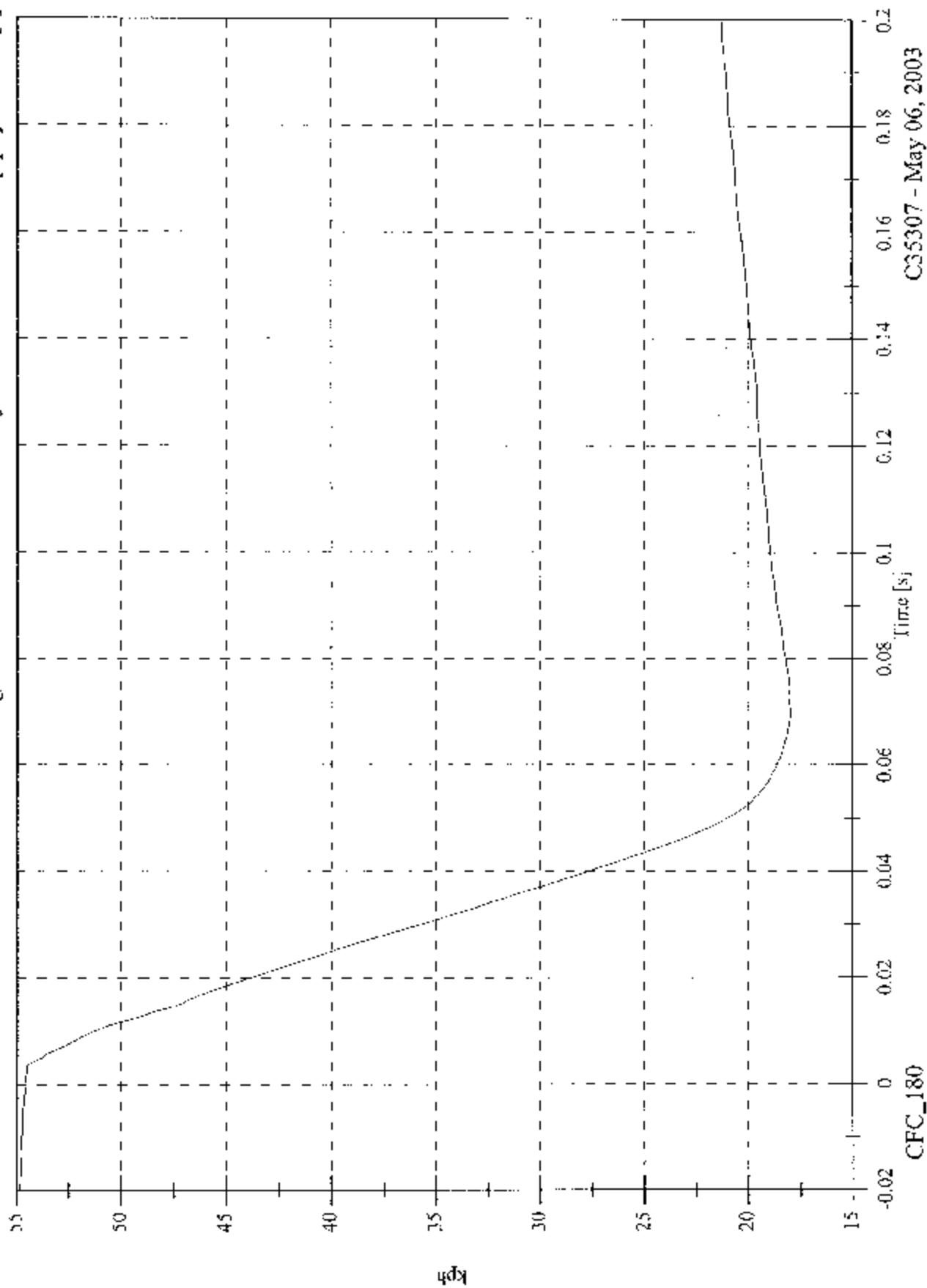


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 54.9 [kph] at -0.019 [s]
 Min: 18.0 [kph] at 0.070 [s]

V1 Moving Barrier Left Rail X Velocity



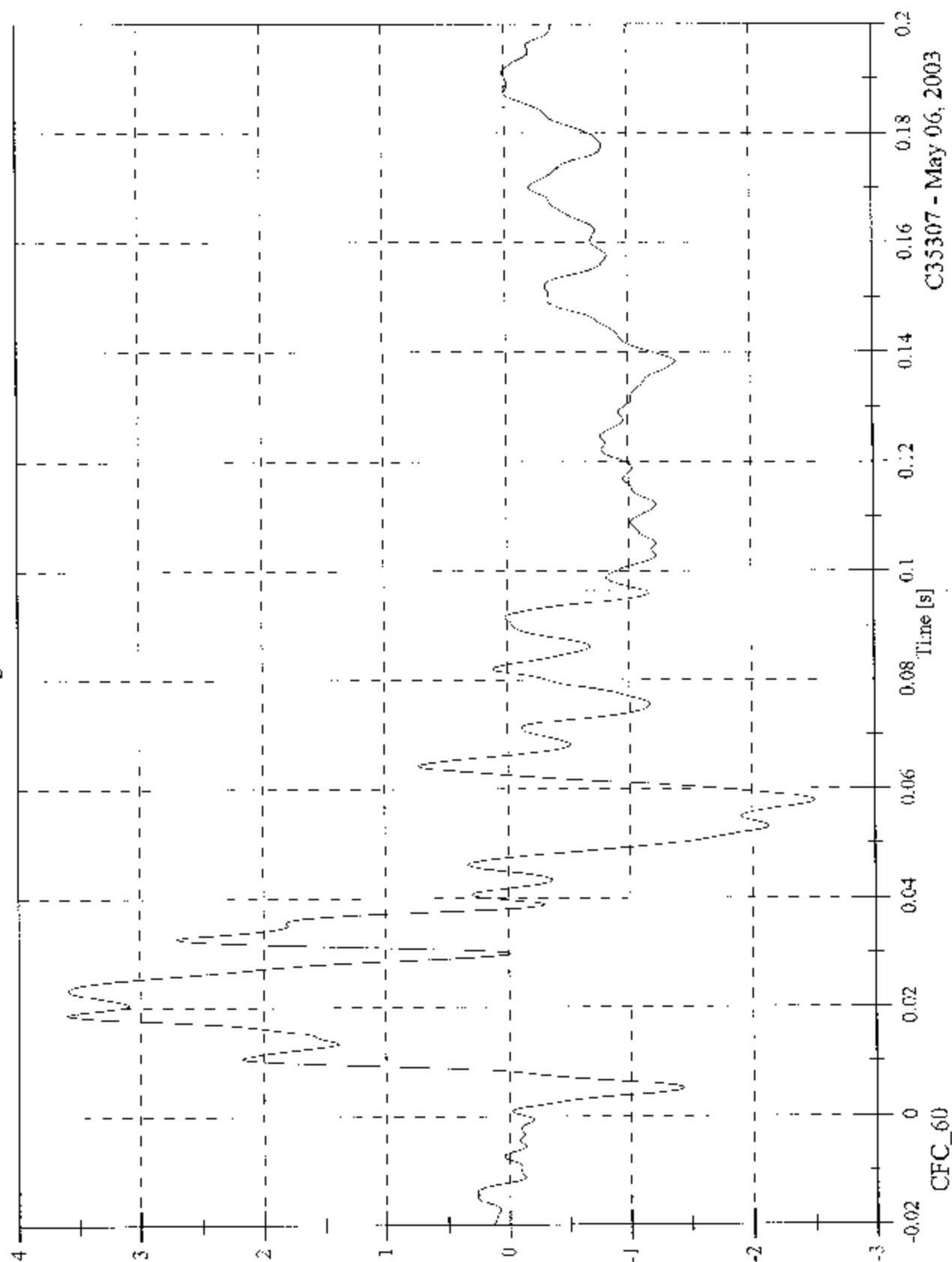
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 3.6 [g] at 0.019 [s]

Min: -2.5 [g] at 0.058 [s]

VJ Moving Barrier Left Rail Y

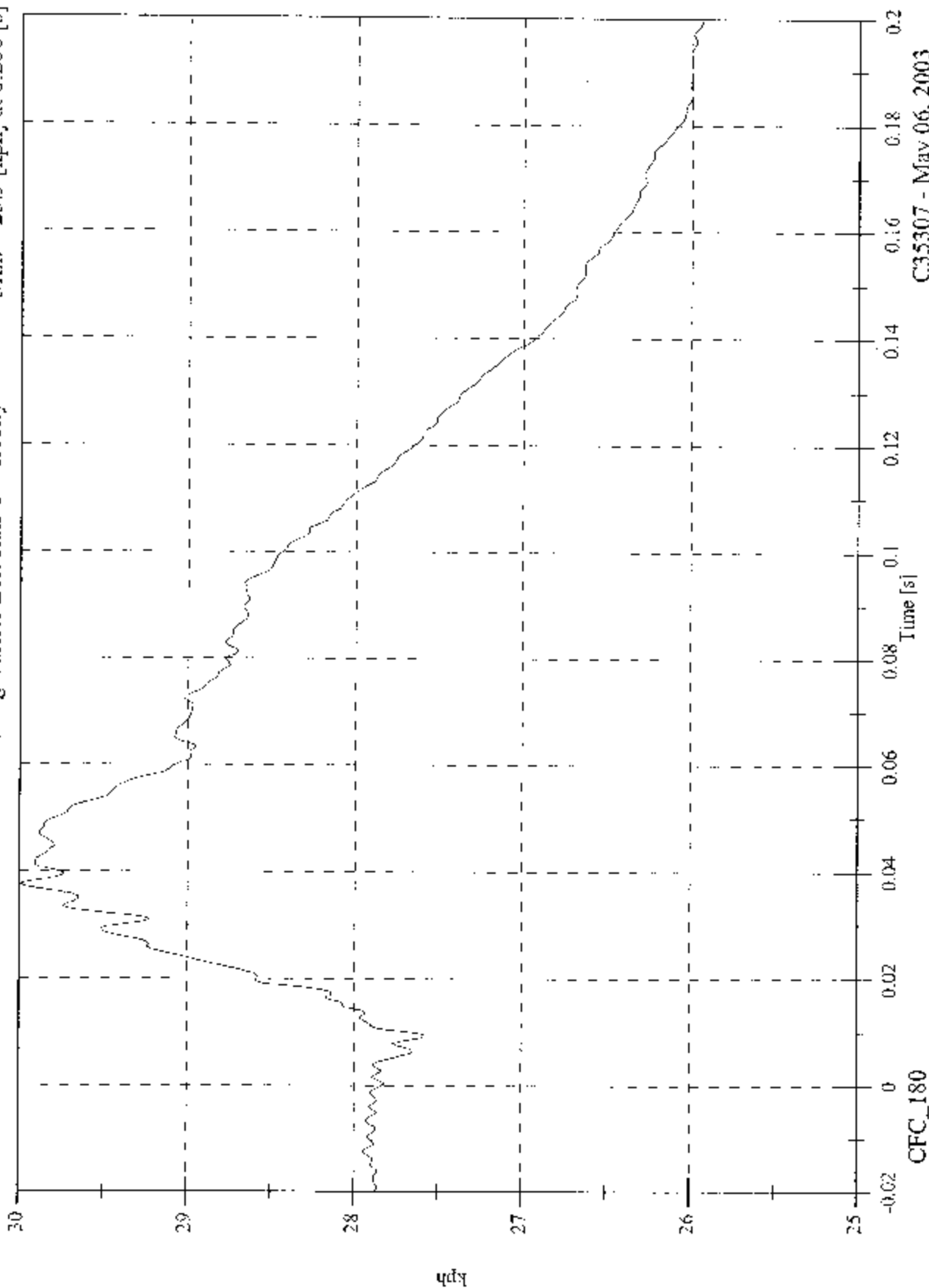


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 30.0 [kph] at 0.037 [s]
 Min: 25.9 [kph] at 0.200 [s]

V1 Moving Barrier Left Rail Y Velocity

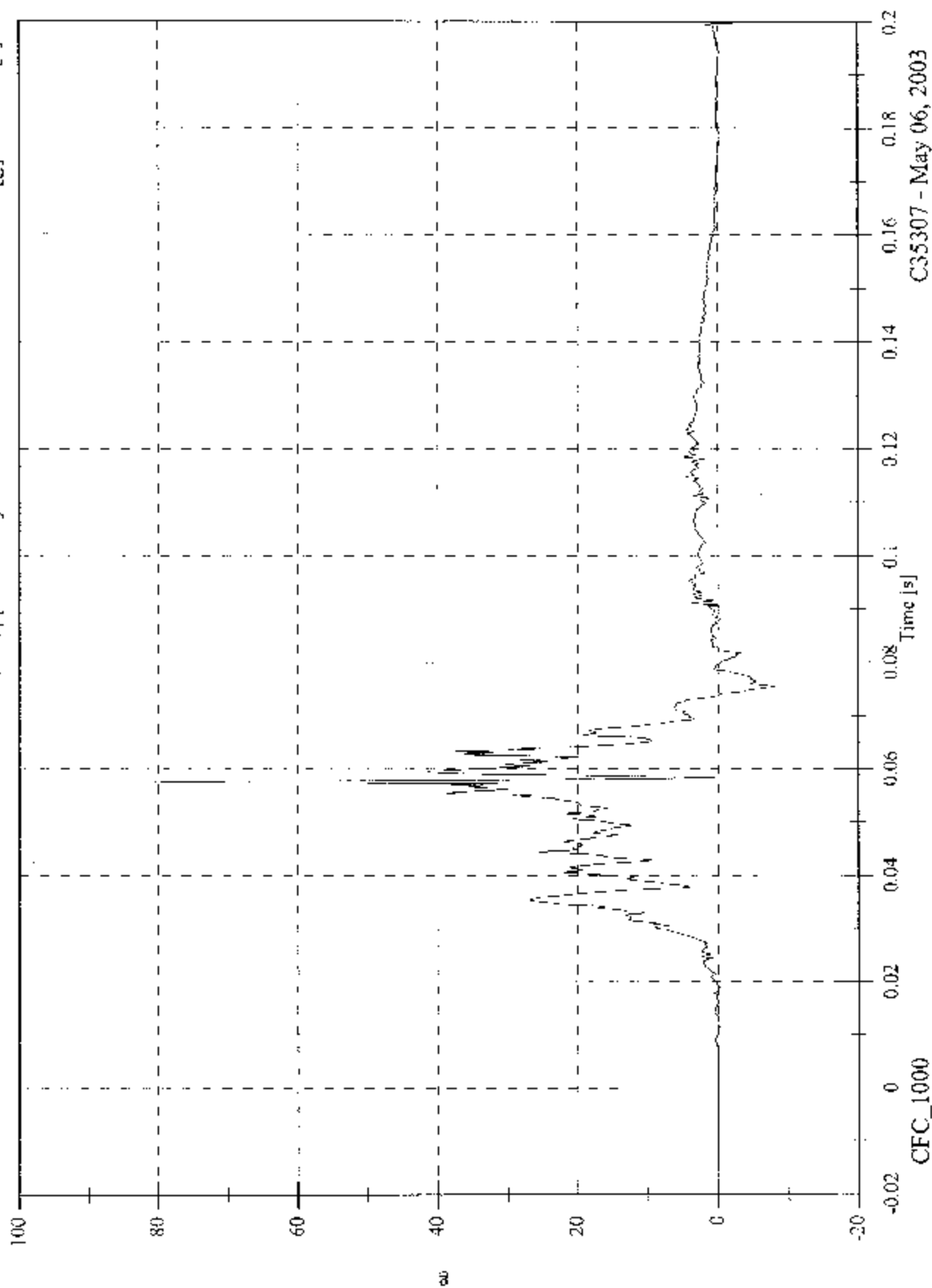


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Upper Rib Ry

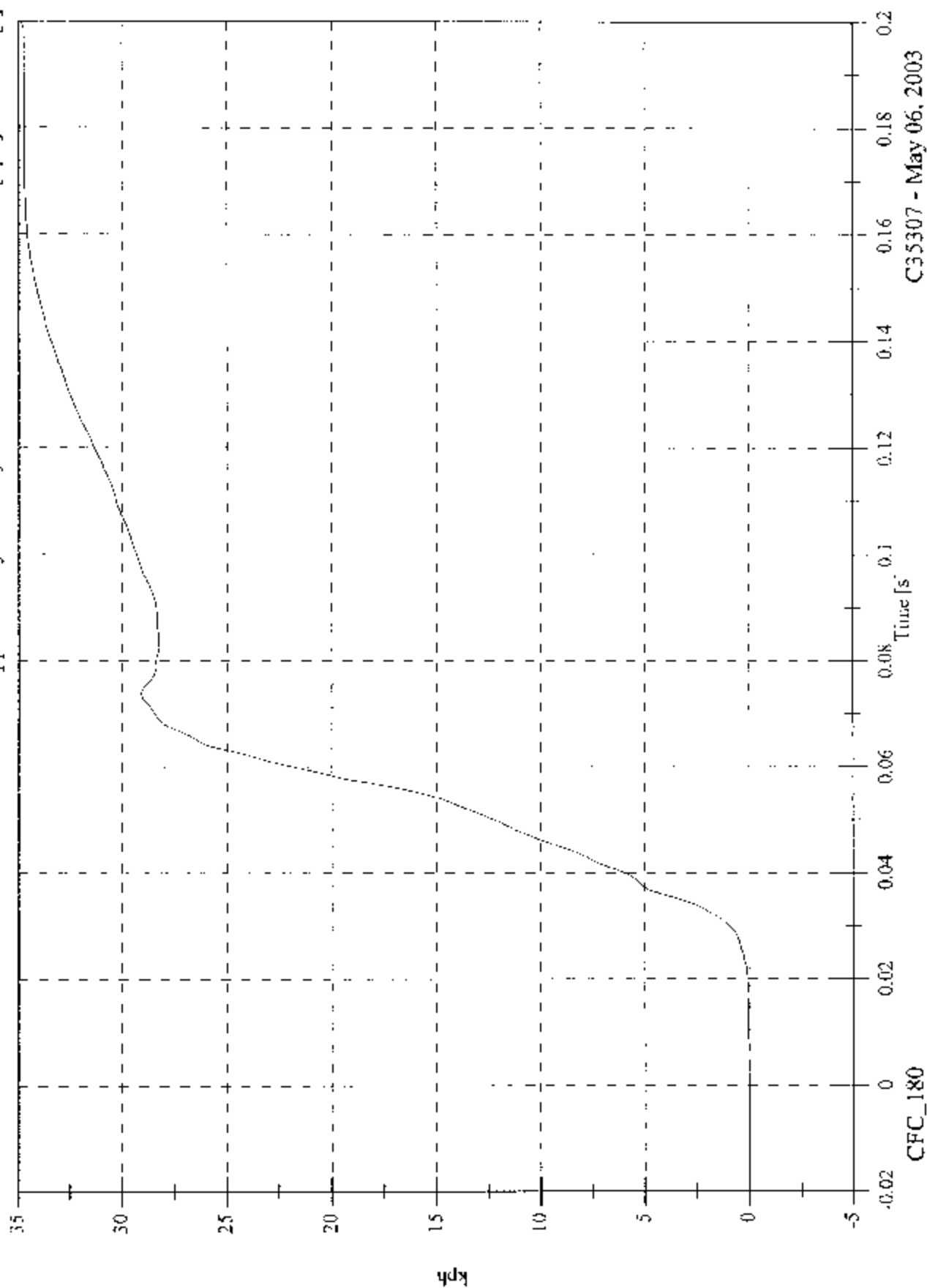
Max: 81.0 [g] at 0.057 [s]
Min: -8.0 [g] at 0.076 [s]



2003 FMVSS 214D Test 8 2003 Honda Element

Max: 35.0 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.015 [s]

V2PI Upper Rib Ry Velocity

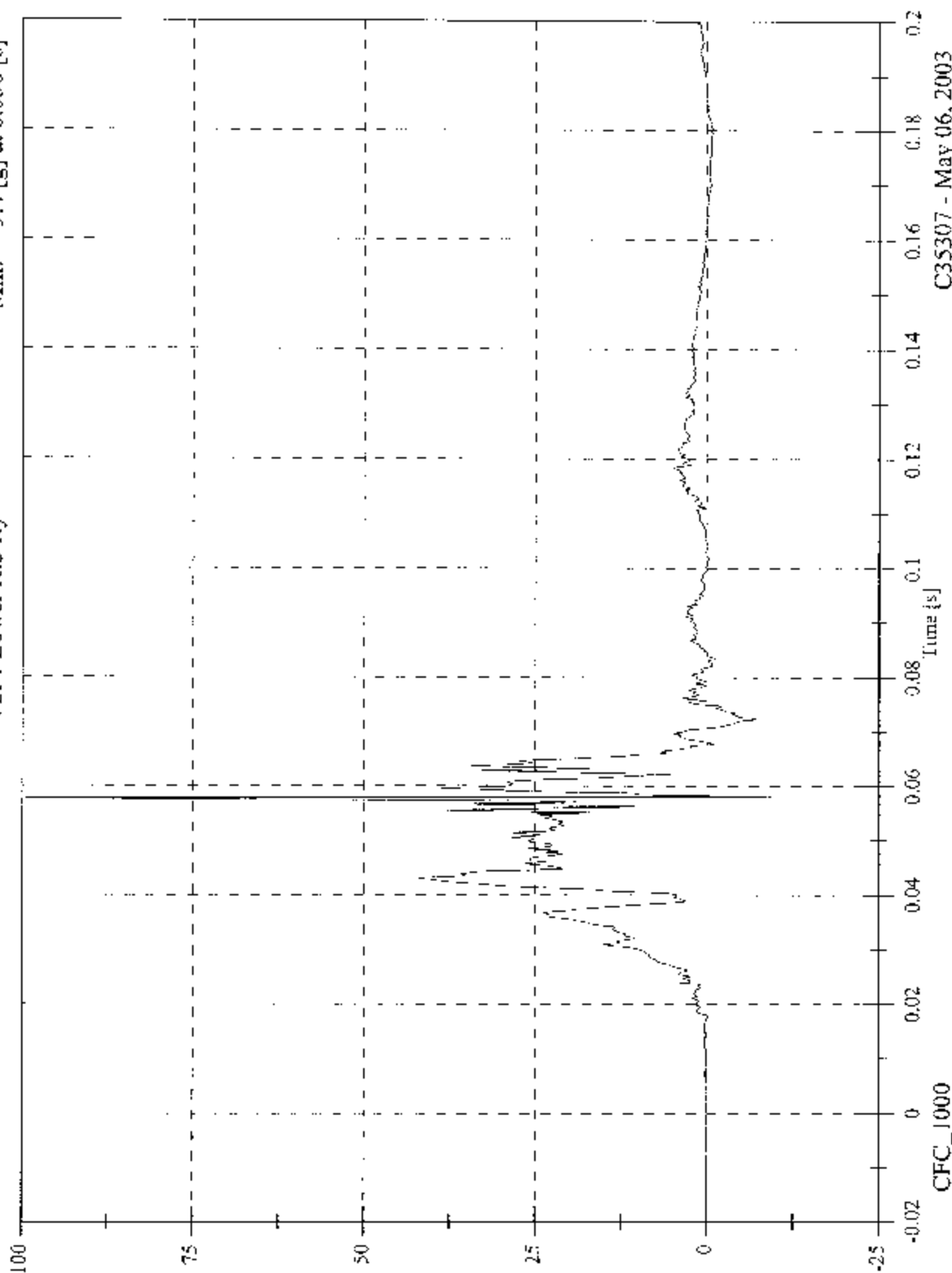


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2003 FMVSS 214D Test 8 2003 Honda Element

V2PI Lower Rib Ry

Max: 99.5 [g] at 0.058 [s]
Min: -9.4 [g] at 0.058 [s]

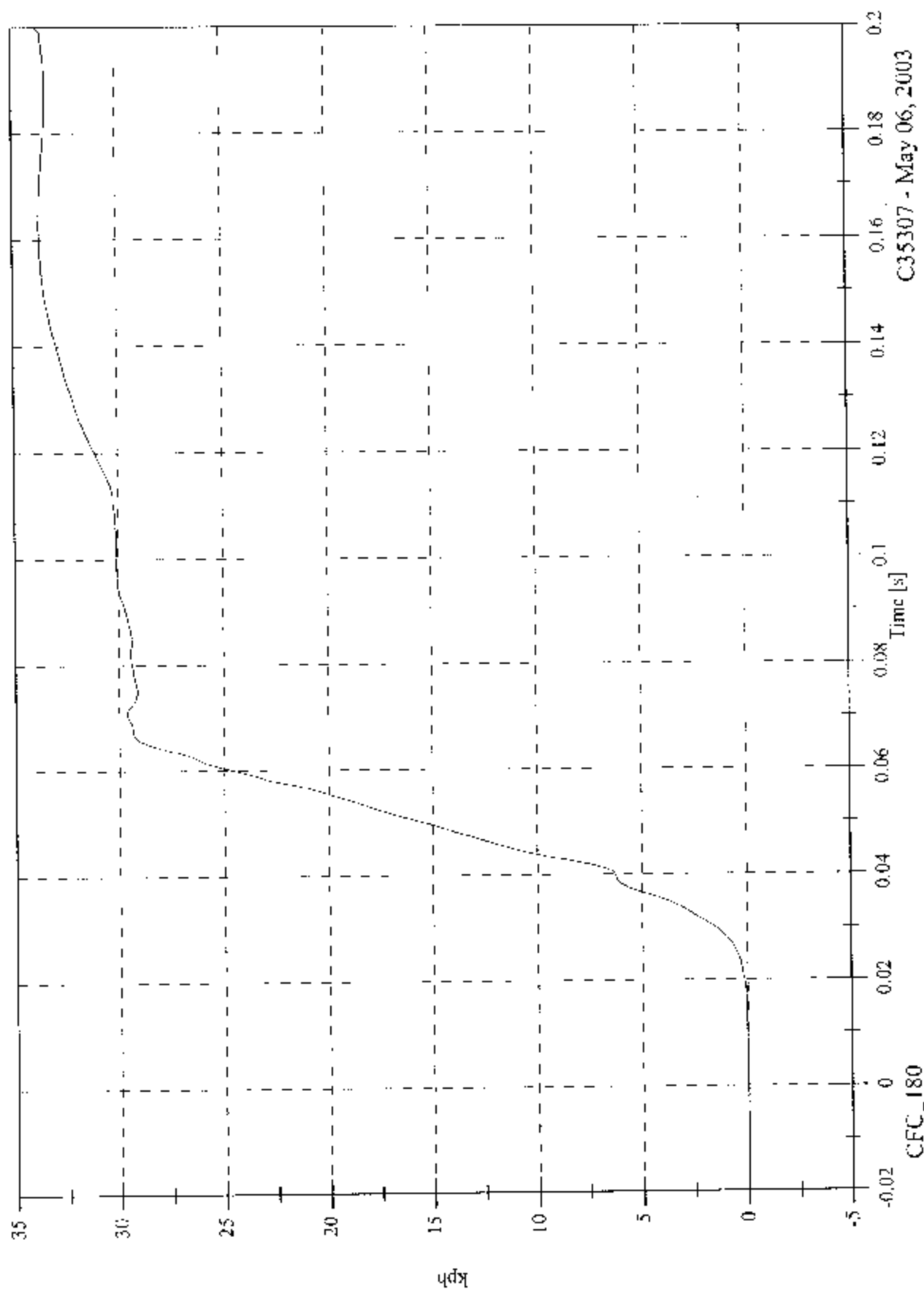


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 33.9 [kph] at 0.200 [s]
 Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Rib Ry Velocity

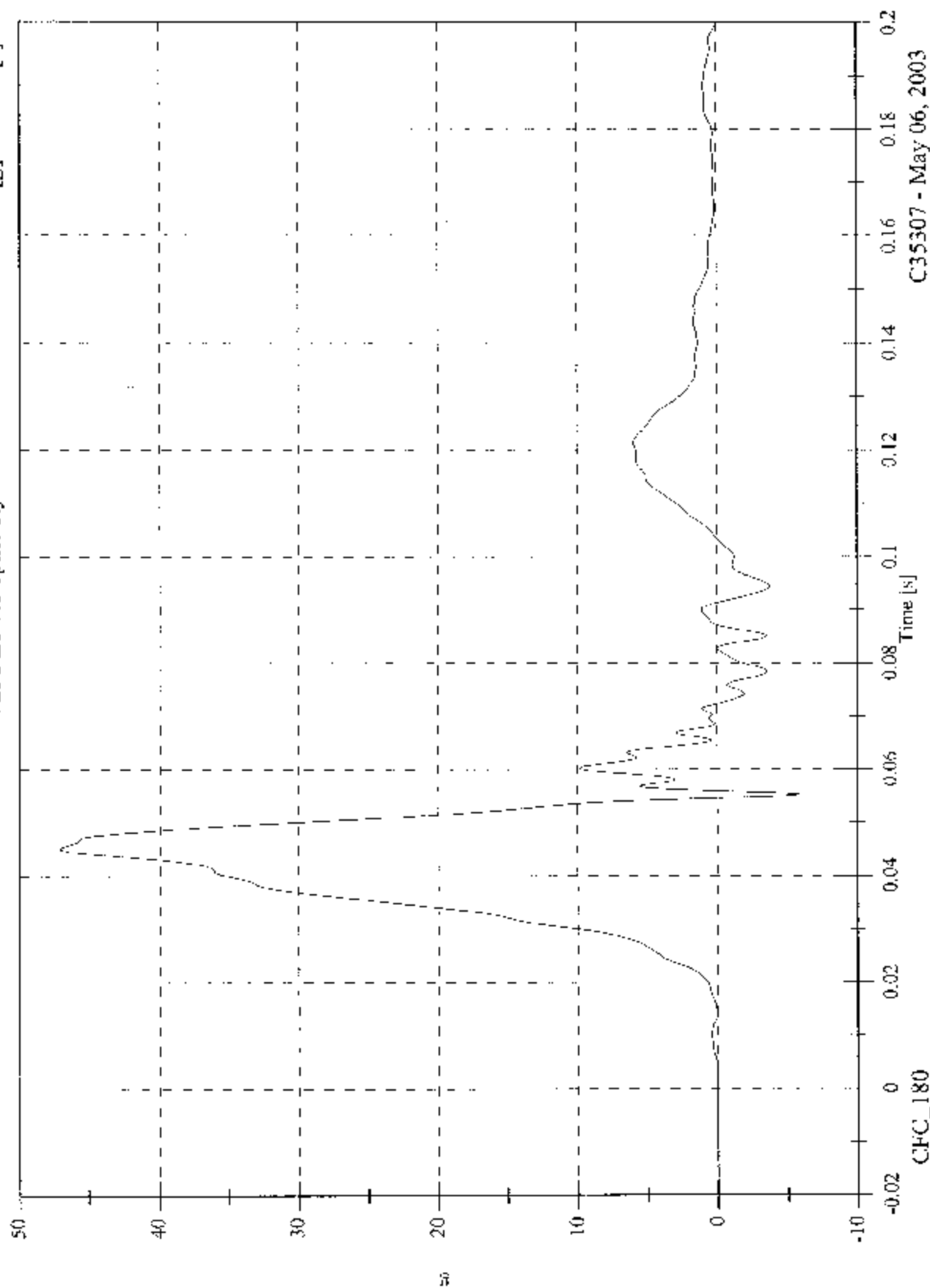


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Max: 47.1 [g] at 0.045 [s]
Min: -6.0 [g] at 0.055 [s]

V2P1 Lower Spine Ry

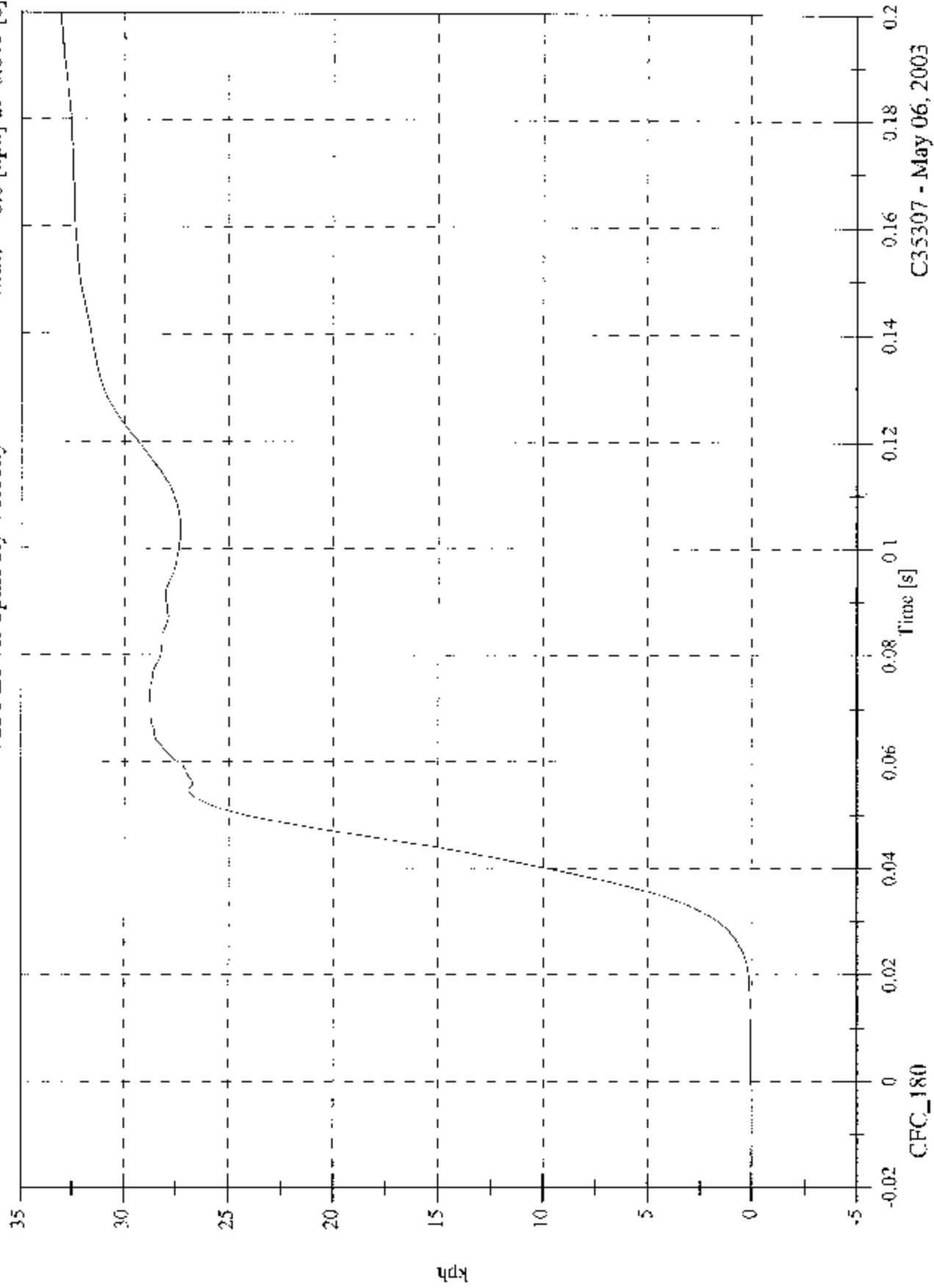


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 33.1 [kph] at 0.200 [s]
Min: -0.0 [kph] at -0.015 [s]

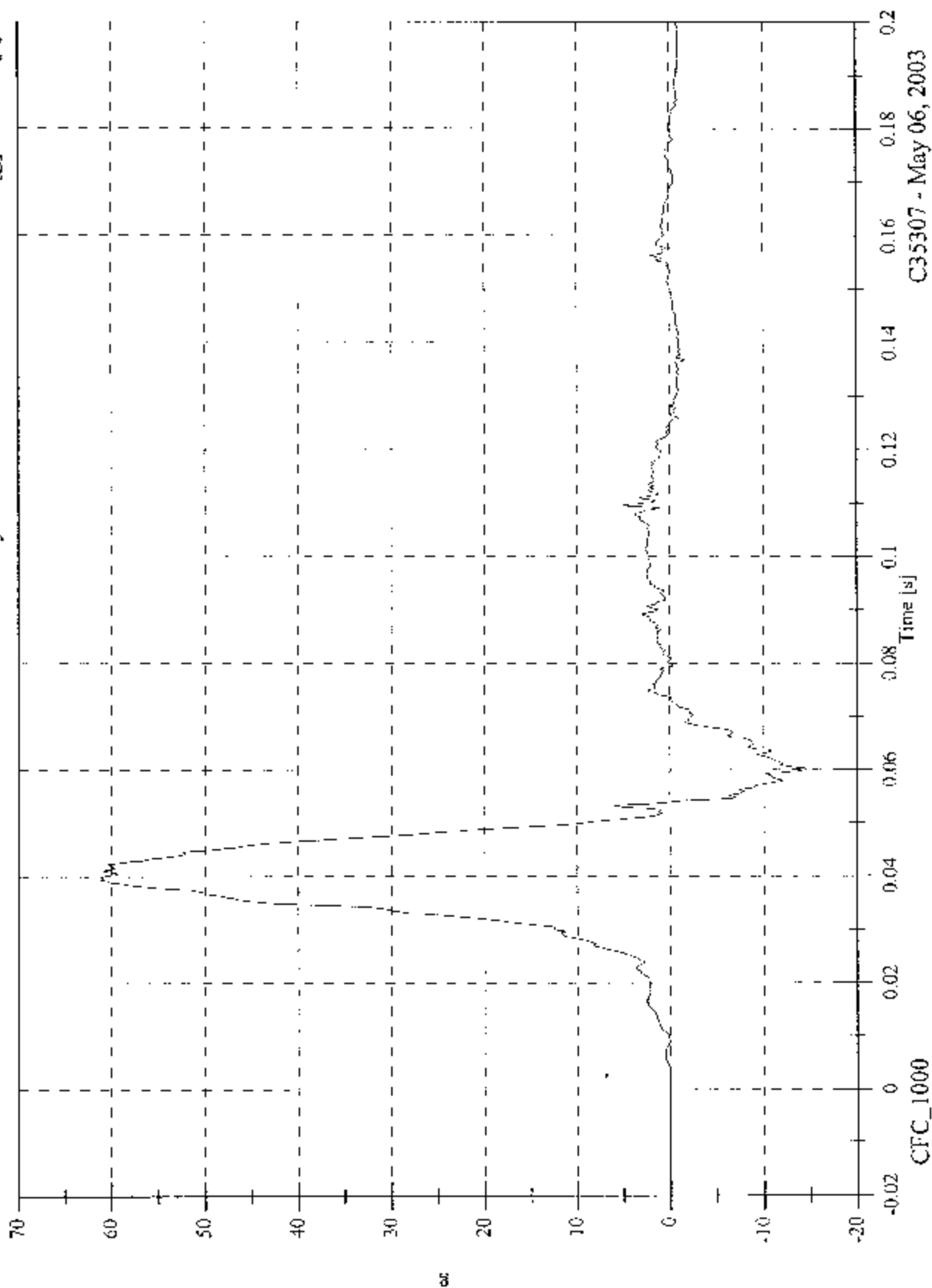
V2P1 Lower Spine Ry Velocity



2003 FMVSS 214D Test 8 2003 Honda Element

Max: 61.2 [g] at 0.040 [s]
Min: -14.6 [g] at 0.060 [s]

V2P1 Pelvic Ry

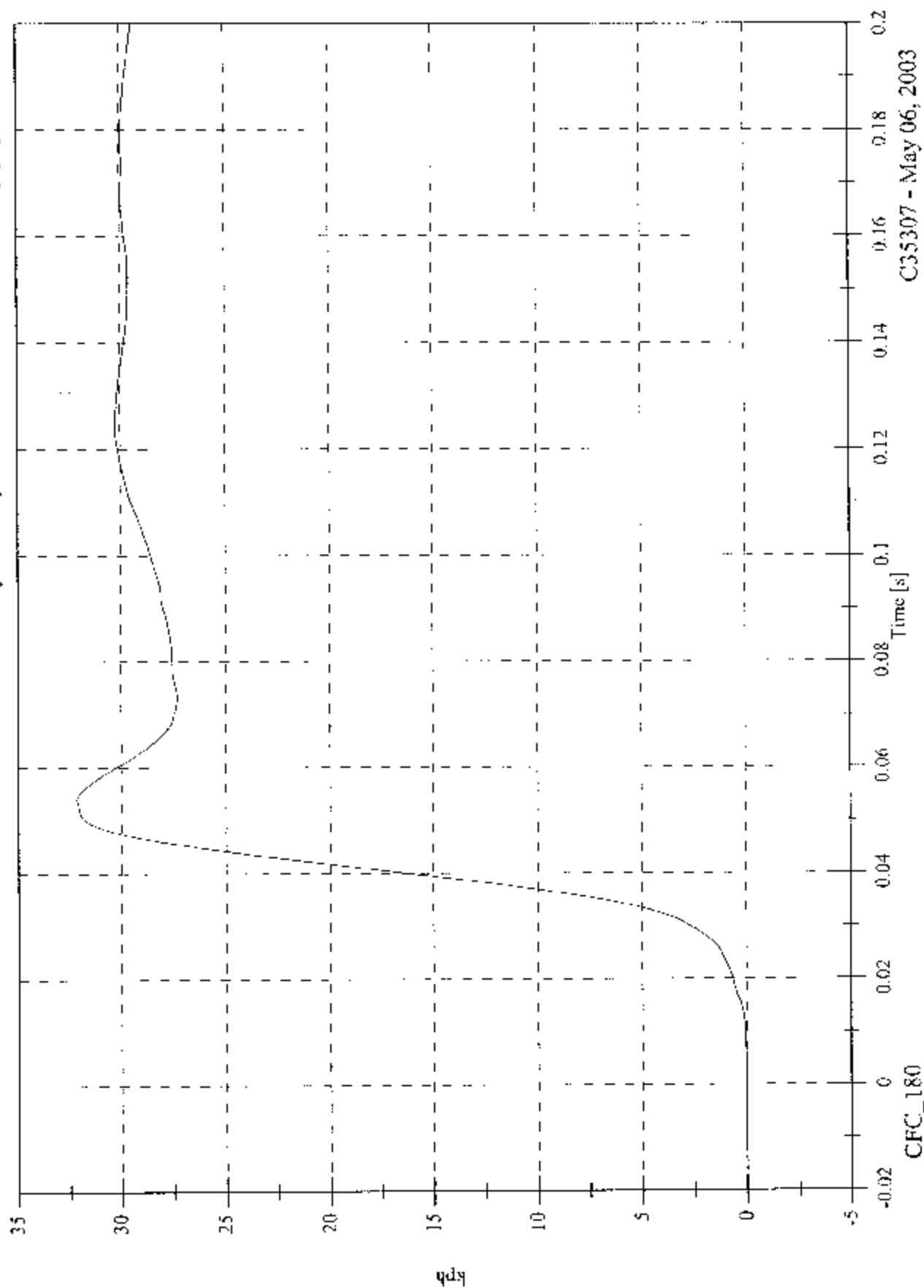


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Max: 32.2 [kph] at 0.054 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P | Pelvic Ry Velocity

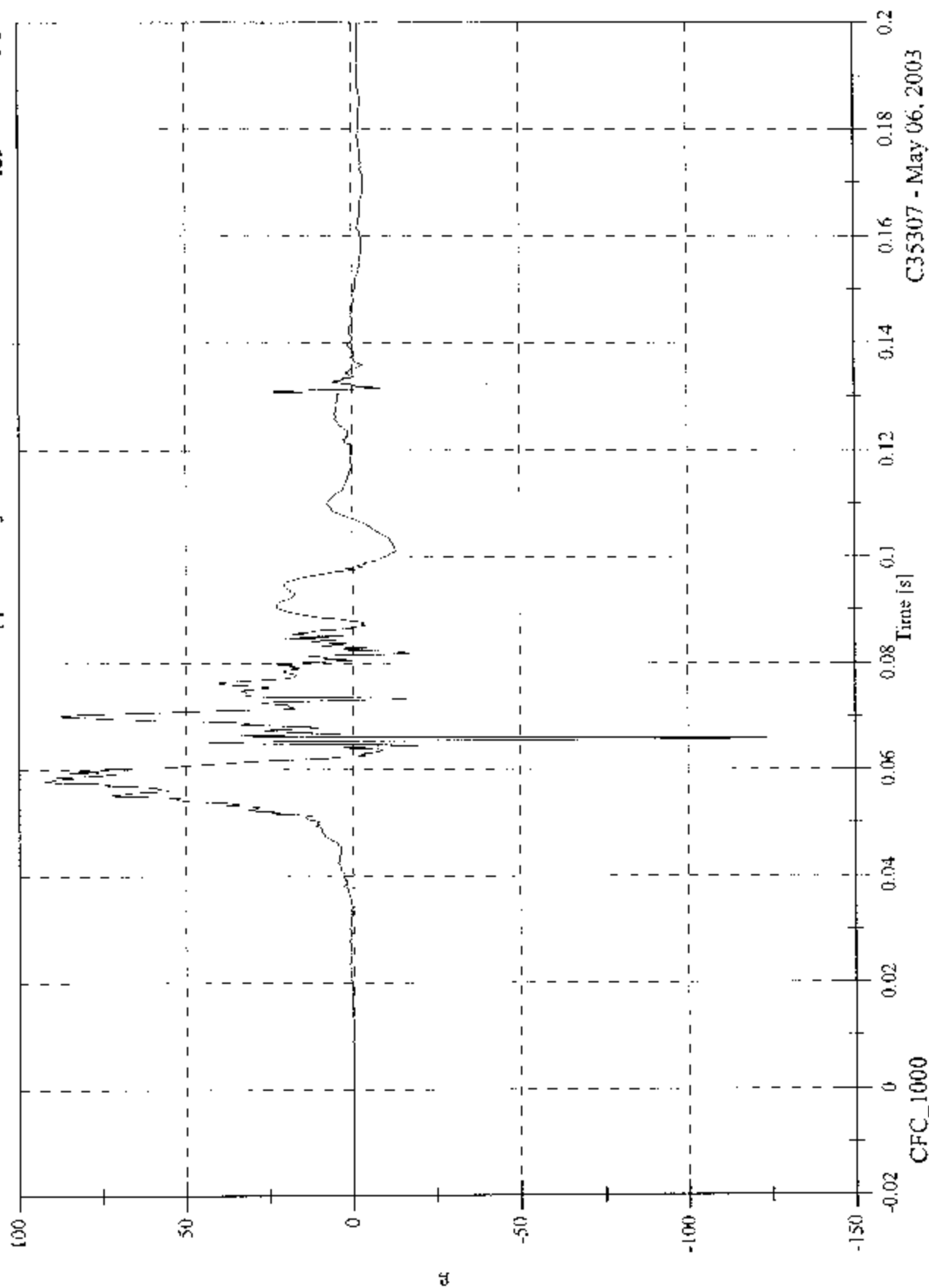


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Max: 92.5 [g] at 0.058 [s]
Min: -123.8 [g] at 0.066 [s]

V2P4 Upper Rib Ry



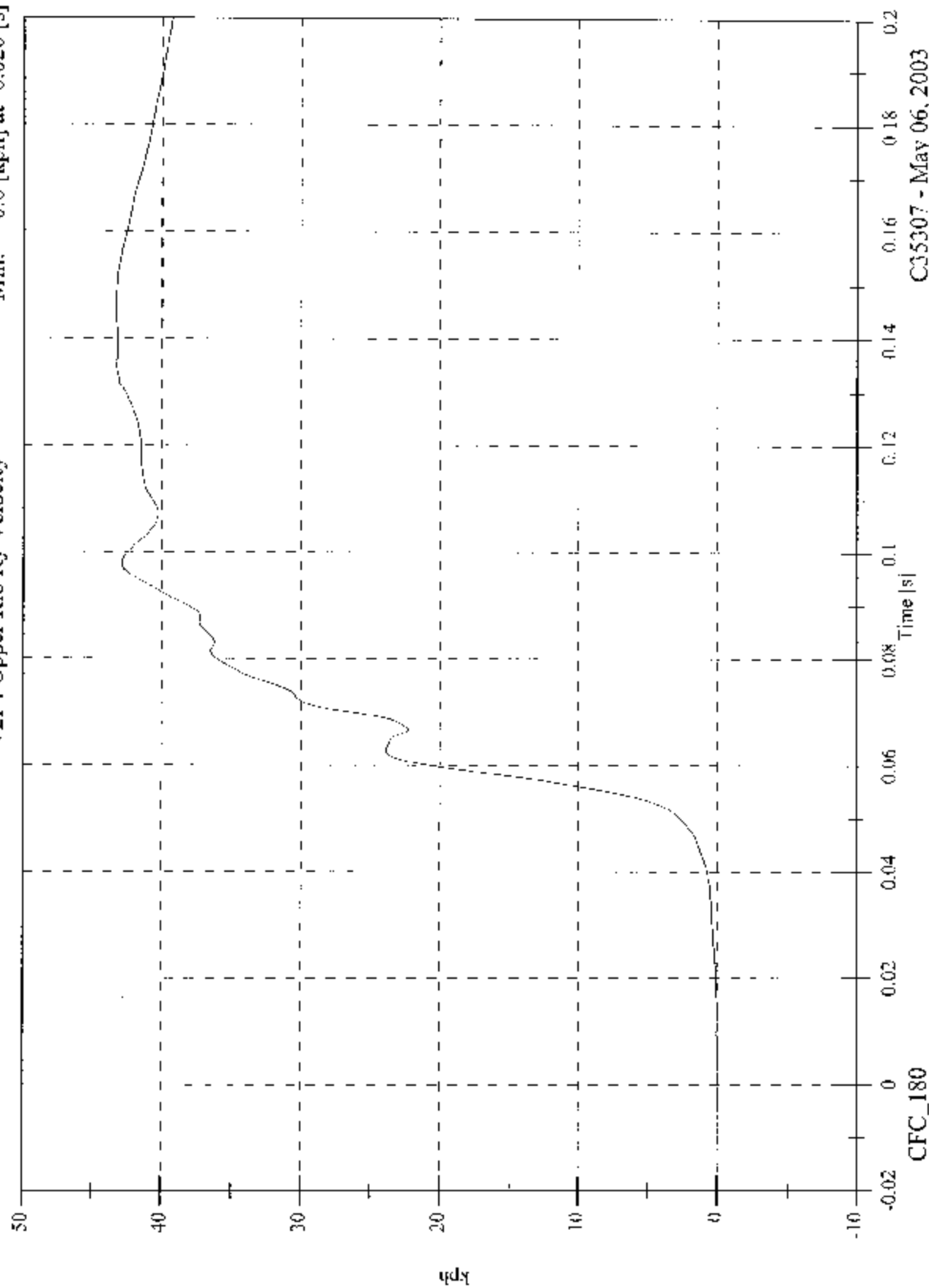
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V2P4 Upper Rib Ry Velocity

Max: 43.3 [kph] at 0.147 [s]

Min: -0.0 [kph] at -0.020 [s]

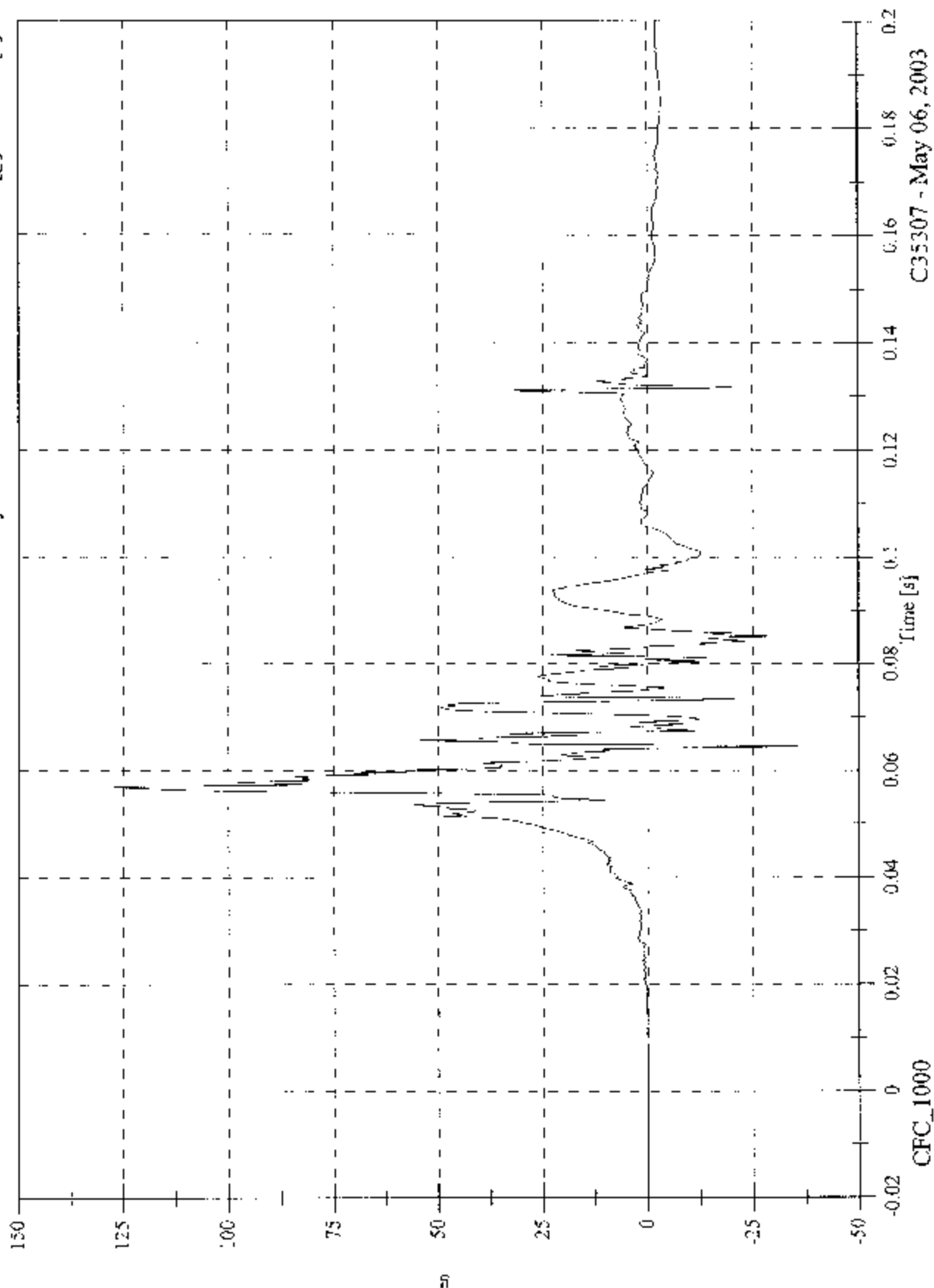


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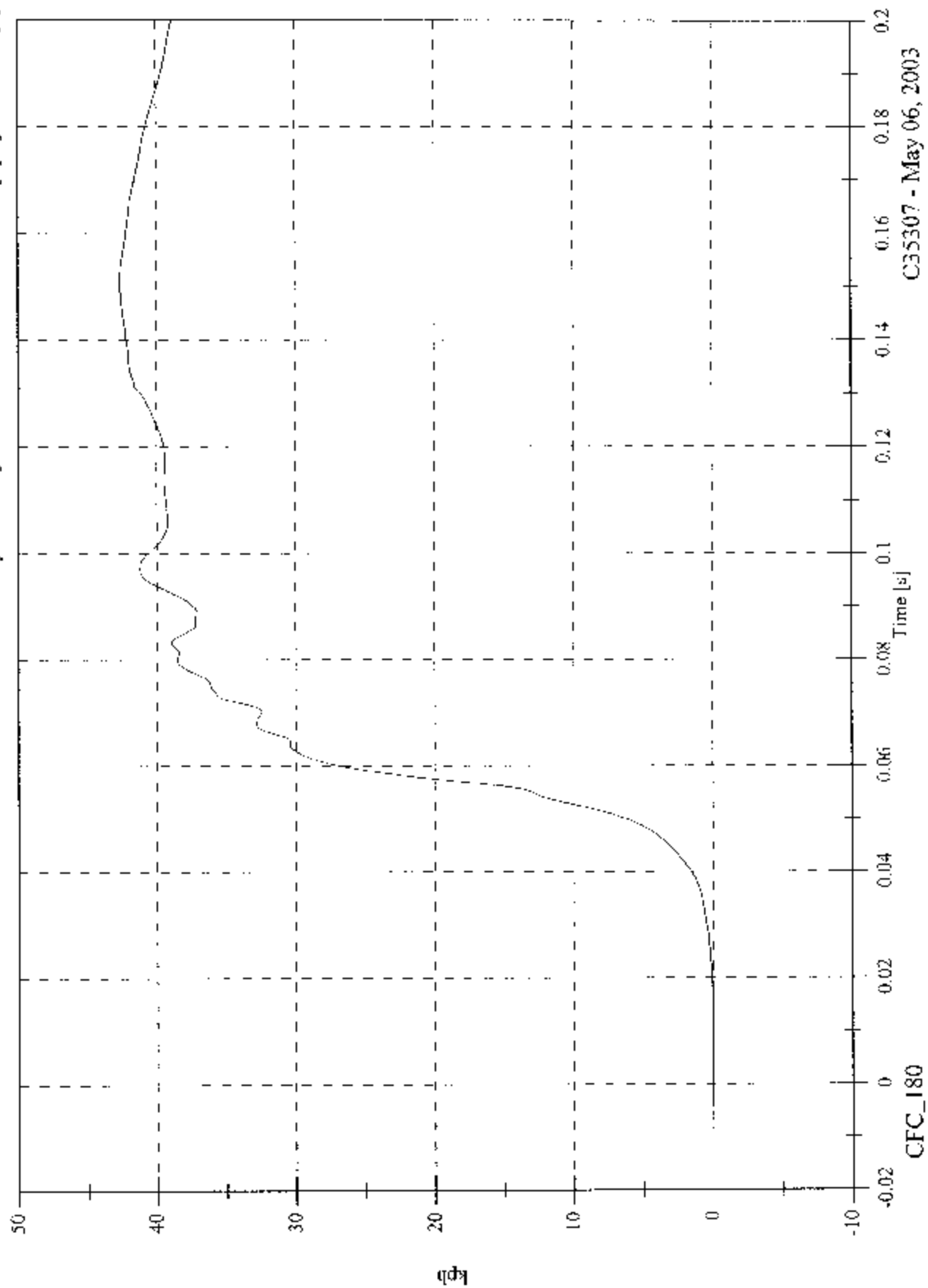
Max: 127.4 [g] at 0.057 [s]
Min: -35.4 [g] at 0.064 [s]

V2P4 Lower Rib Ry



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V2P4 Lower Rib/Ry Velocity

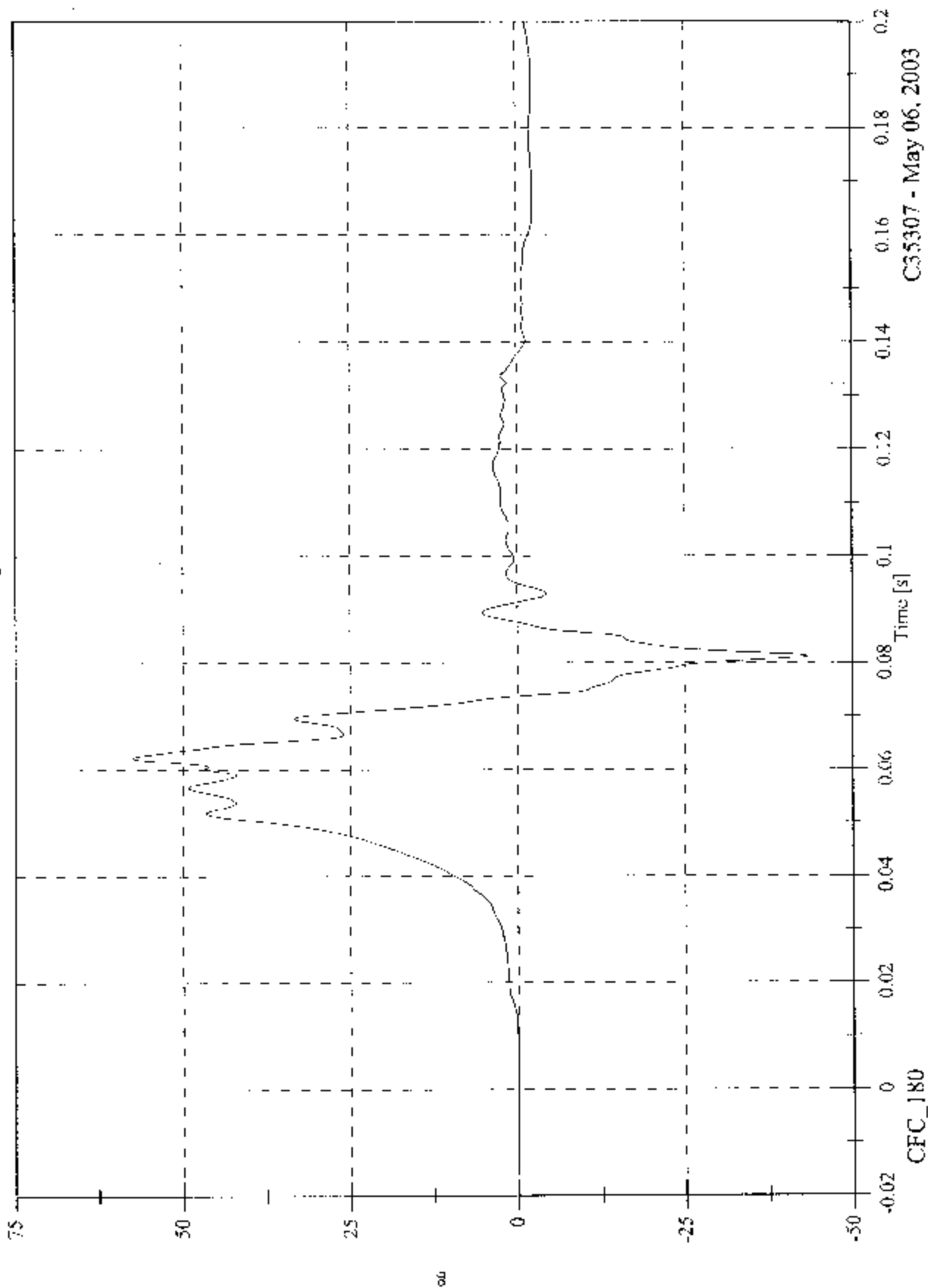


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2003 FMVSS 214D Test 8 2003 Honda Element

Max: 57.5 [g] at 0.062 [s]
Min: -43.3 [g] at 0.081 [s]

V2P4 Lower Spine Ry

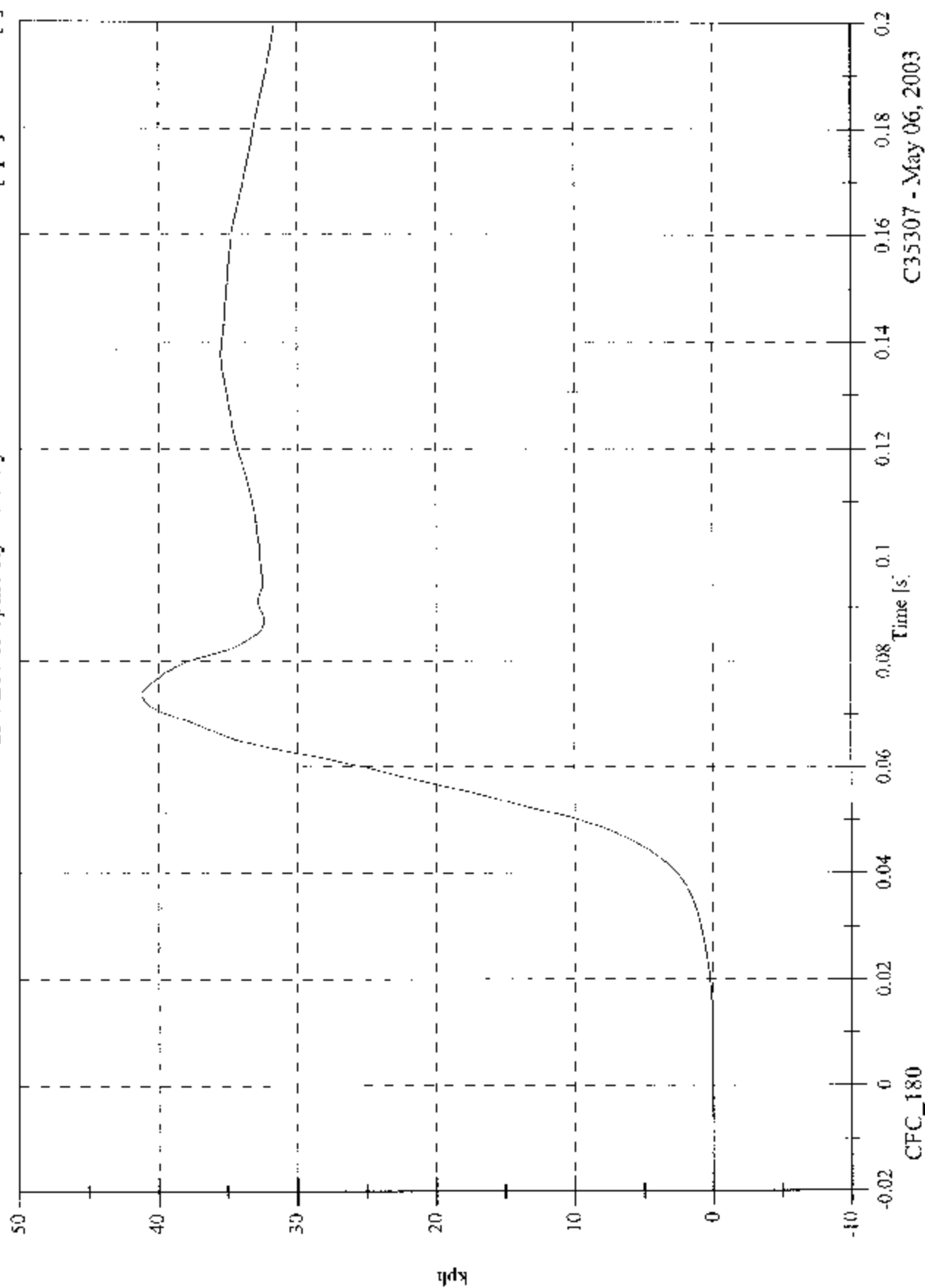


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Lower Spine Ry Velocity

Max: 41.2 [kph] at 0.074 [s]
Min: -0.0 [kph] at -0.008 [s]

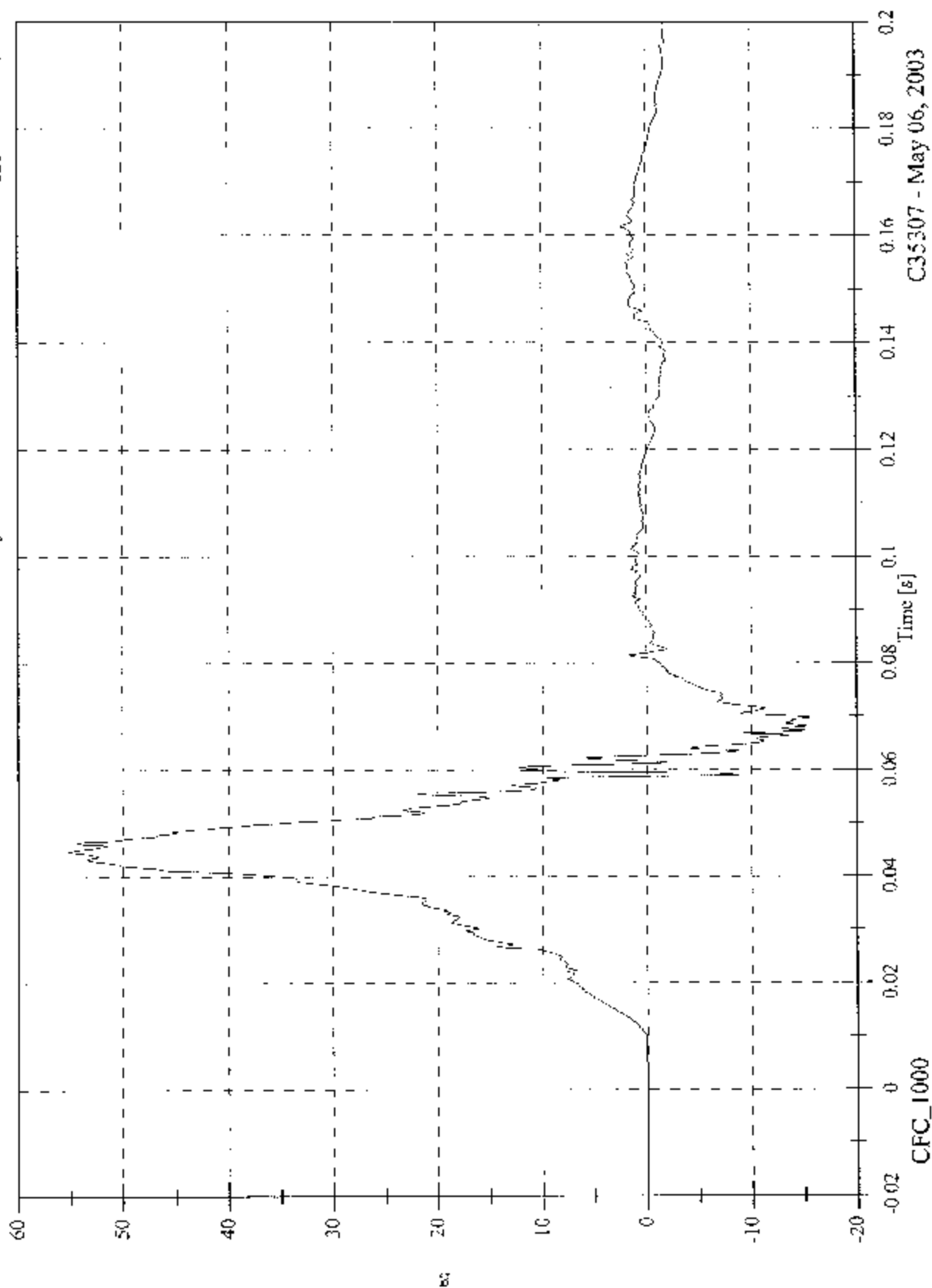


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V2P4 Pelvic Ry

Max: 55.2 [g] at 0.045 [s]
Min: -15.7 [g] at 0.070 [s]

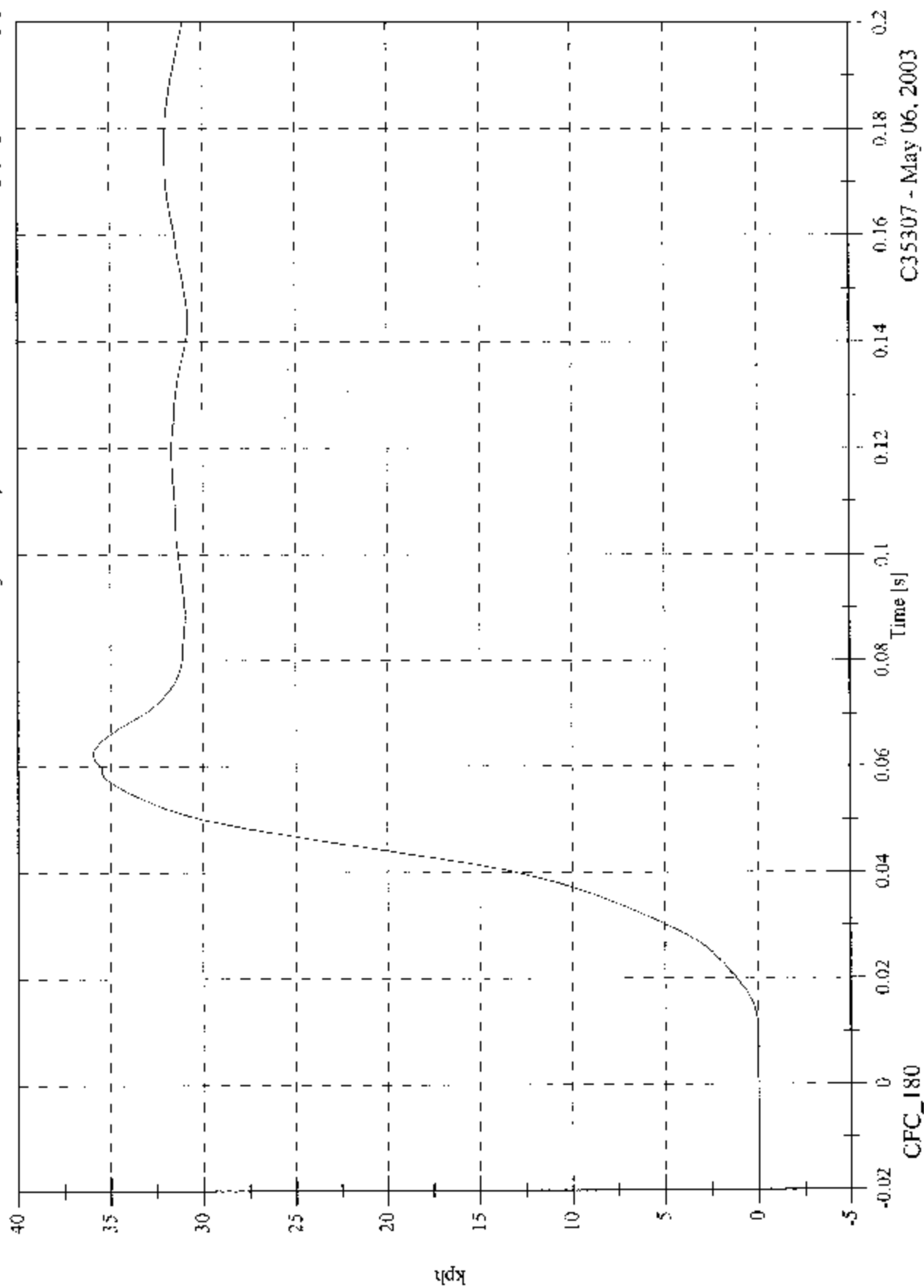


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2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Pelvic Ry Velocity

Max: 35.9 [kph] at 0.062 [s]
Min: -0.0 [kph] at -0.018 [s]

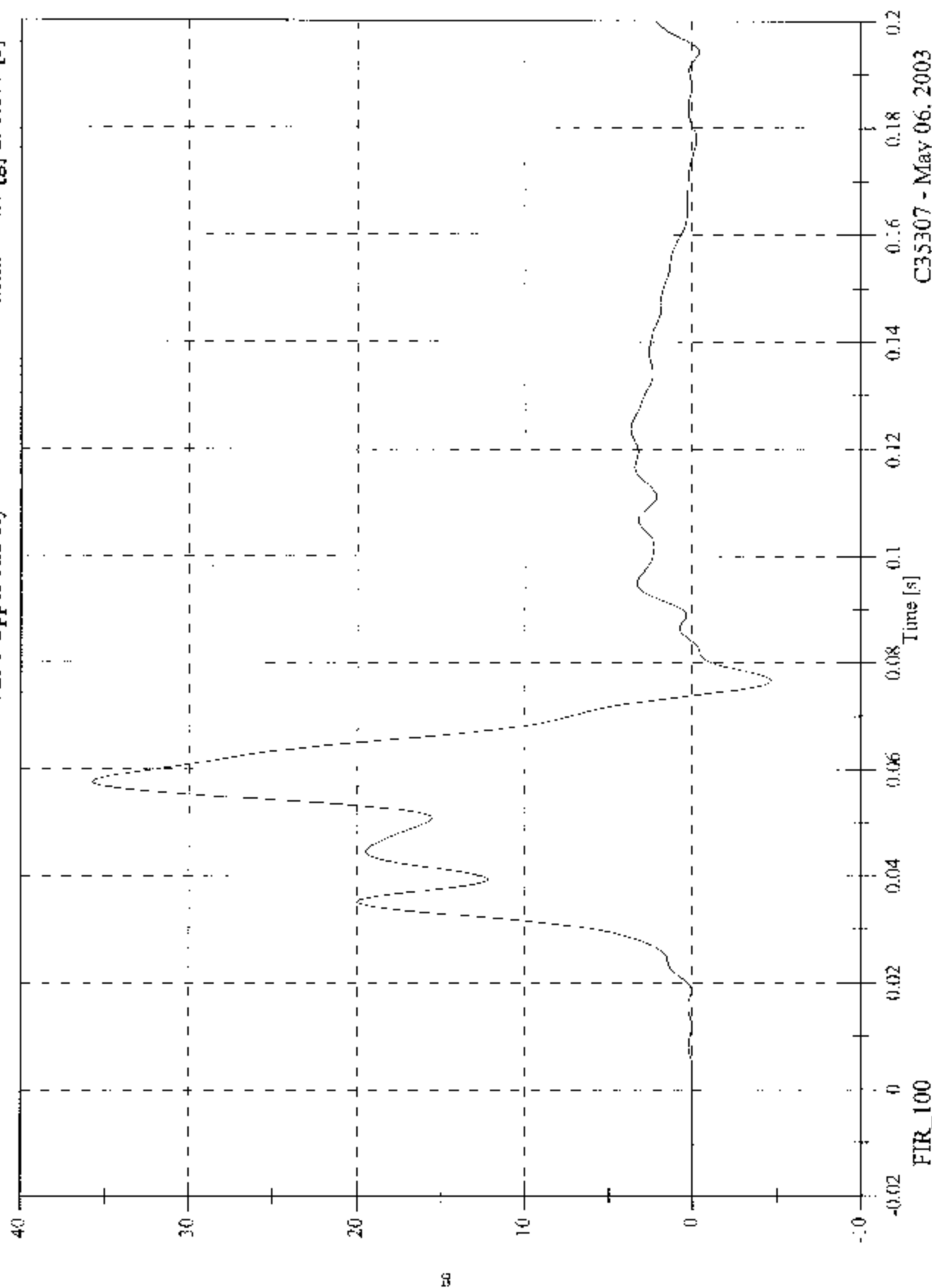


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 35.8 [g] at 0.057 [s]
Min: -4.7 [g] at 0.077 [s]

V2P1 Upper Rib Ry

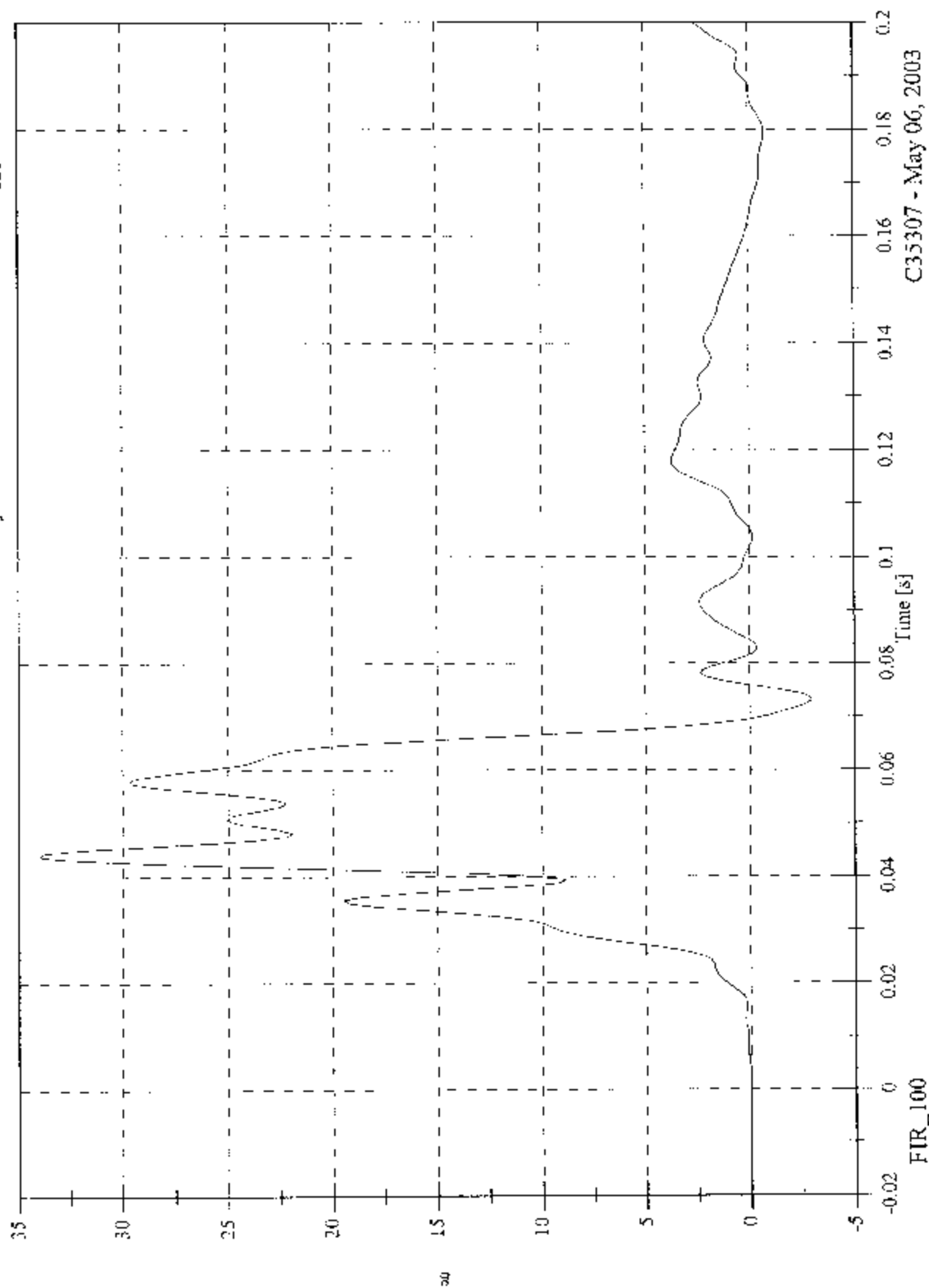


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Rib Ry

Max: 34.0 [g] at 0.044 [s]
Min: -3.0 [g] at 0.073 [s]

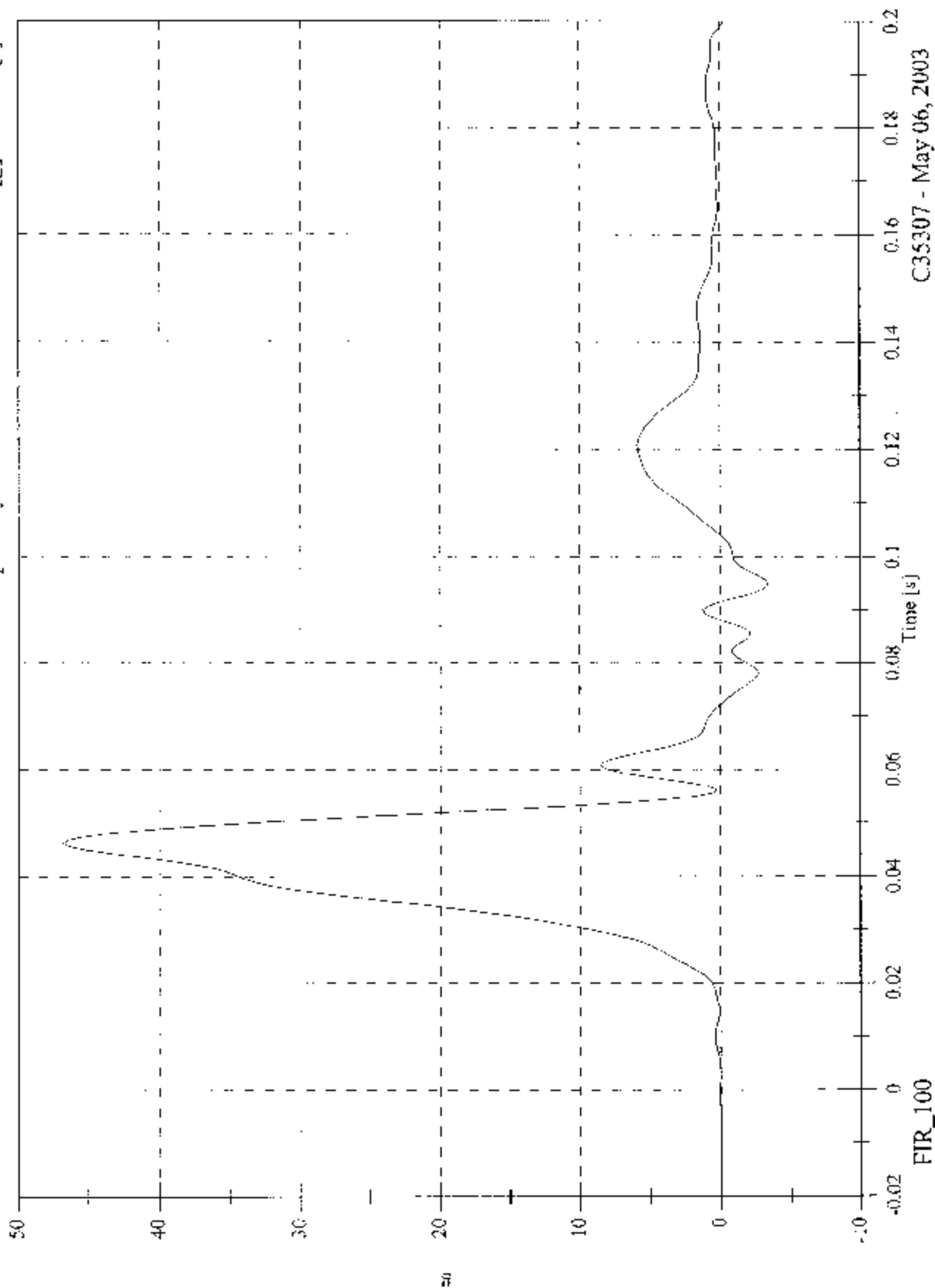


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P1 Lower Spine Ry

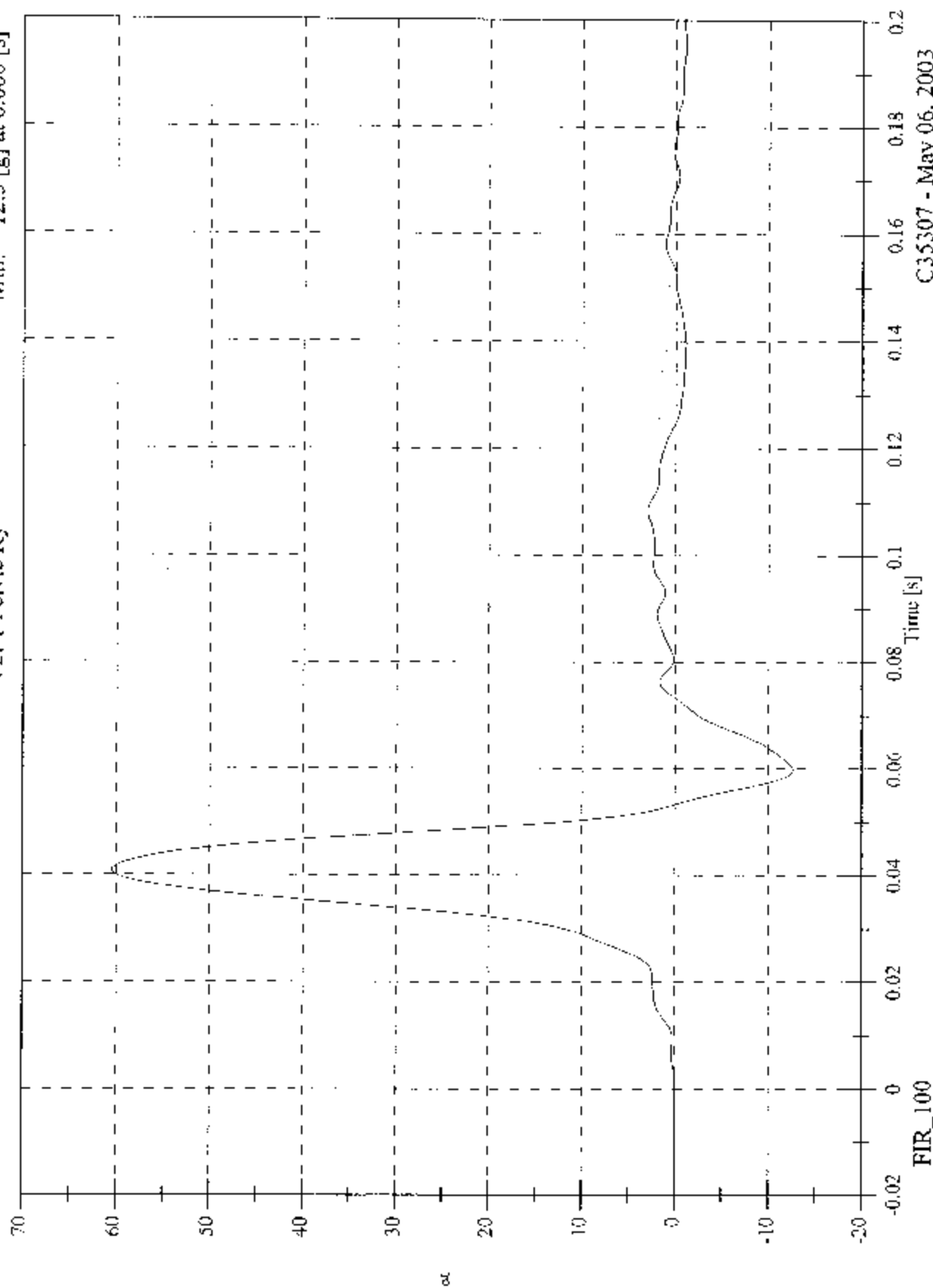
Max: 46.8 [g] at 0.046 [s]
Min: -3.4 [g] at 0.095 [s]



2003 FNVSS 214D Test 8 2003 Honda Element

V2P1 Pelvic Ry

Max: 60.4 [g] at 0.041 [s]
Min: -12.5 [g] at 0.060 [s]

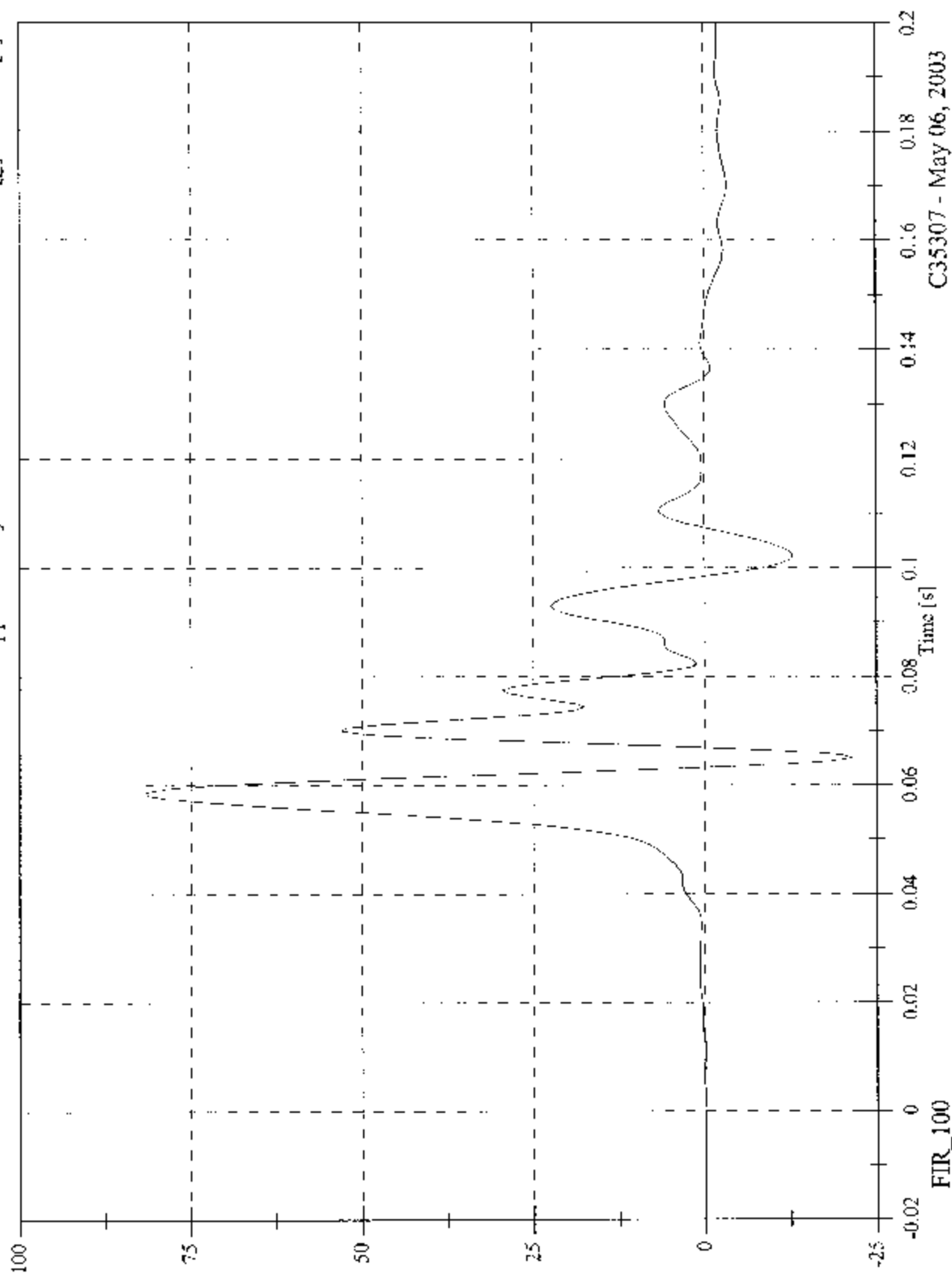


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

V2P4 Upper Rib Ry

Max: 81.5 [g] at 0.059 [s]
Min: -21.5 [g] at 0.065 [s]

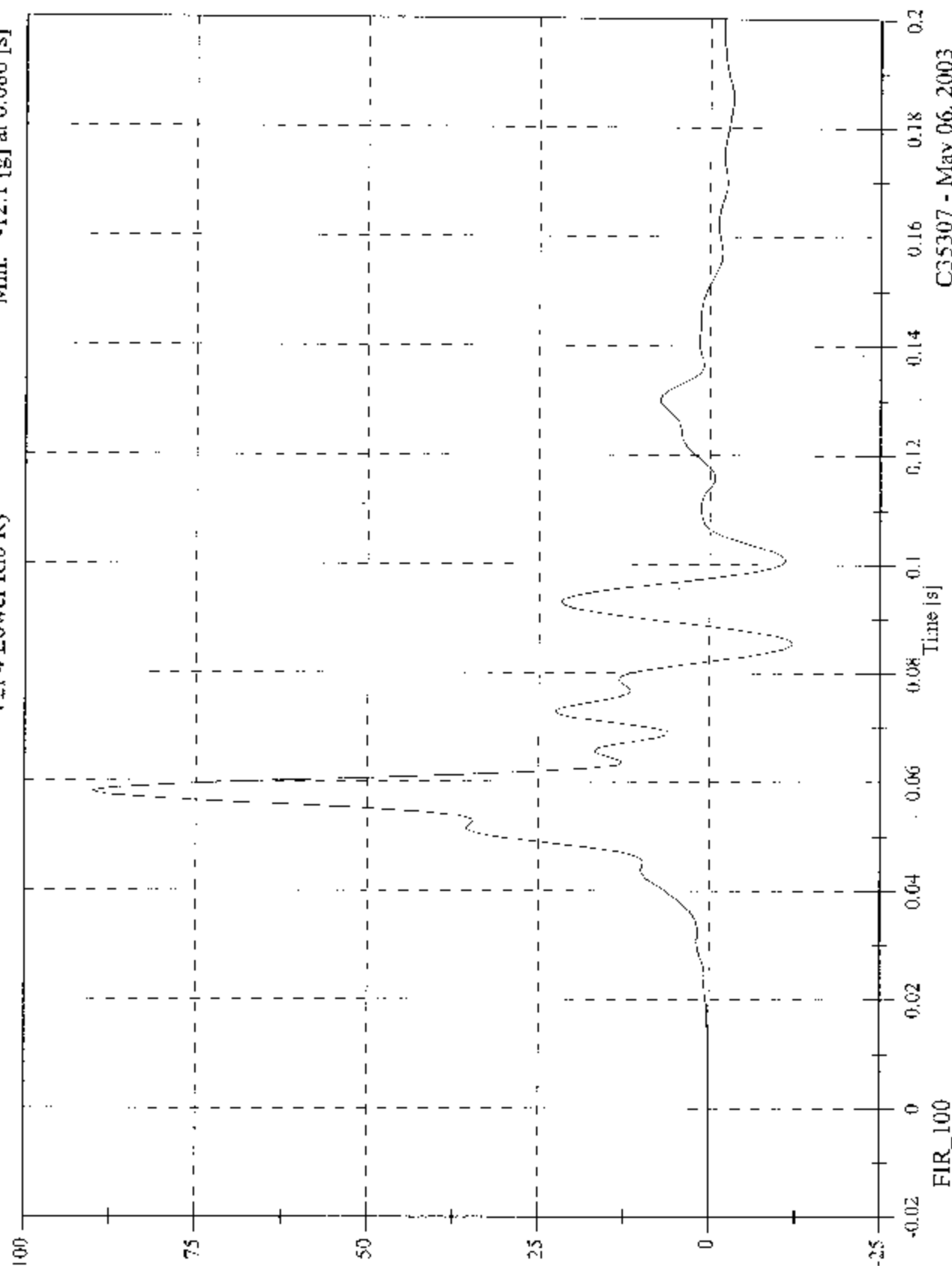


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 90.3 [g] at 0.058 [s]
Min: -12.1 [g] at 0.086 [s]

V2P4 Lower Rib Ry



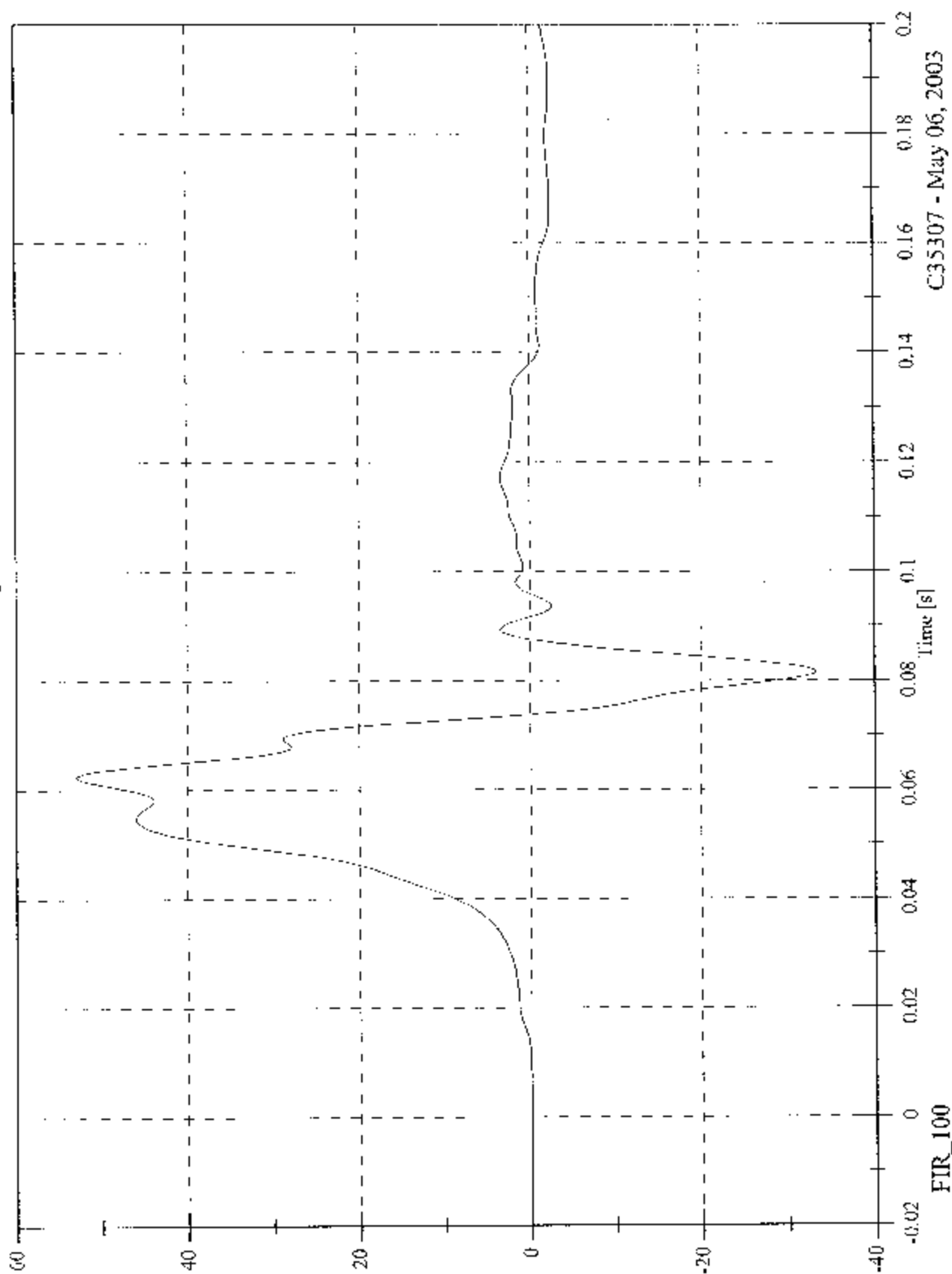
C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 53.0 [g] at 0.062 [s]

Min: -33.1 [g] at 0.081 [s]

V2P4 Lower Spine Ry

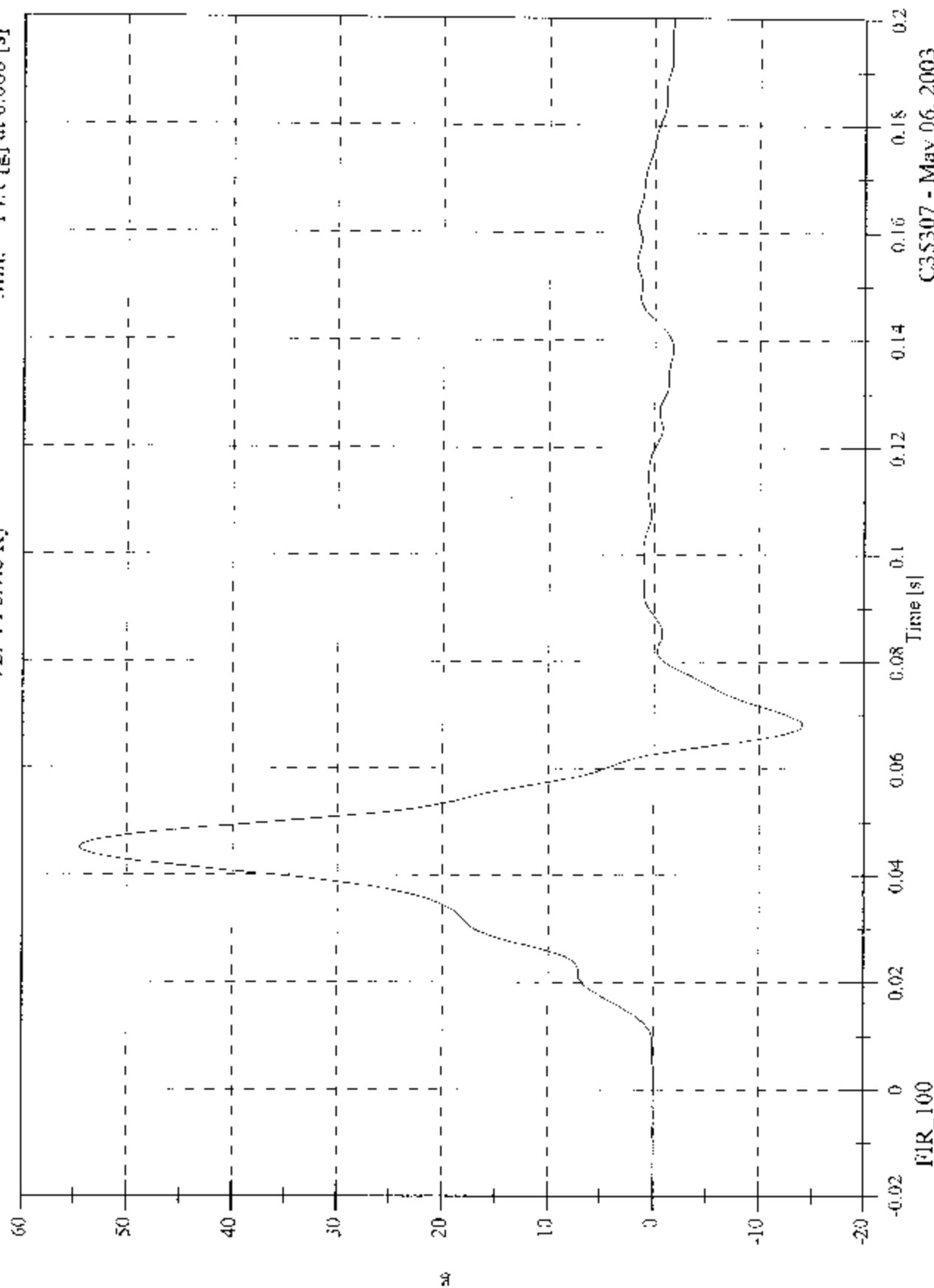


C35307 - May 06, 2003

2003 FMVSS 214D Test 8 2003 Honda Element

Max: 54.5 [g] at 0.045 [s]
Min: -14.1 [g] at 0.068 [s]

V2P4 Pelvic Ry



C35307 - May 06, 2003

APPENDIX C

SID HYBRID III CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID H3 PRE & POST TEST CALIBRATION
CONFIGURED FOR LEFT SIDE IMPACT

Date: May 2, 2003; May 9, 2003

Sequential Test Number:

2; 3

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID H3 015 NO.:		SID H3 016 NO.:	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	902	902	902	902
RH- Rib Height (mm)	501 - 521	511	511	513	513
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	239	239	239	239
KV- Knee Pivot from Back Line (mm)	511 - 526	521	521	521	521
SW- Knee Pivot to Floor (mm)	490 - 505	495	495	495	495
HW- Hip Width (mm)	356 - 391	371	371	371	371
THORAX IMPACTS					
TEMPERATURE (°C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	37	38	37	38
PROBE SPEED (m/s)	4.27 - 4.33	4.3	4.27	4.29	4.28
UPPER RIB (g's)	37 - 46	38.69	37.43	42.97	43.28
LOWER RIB (g's)	37 - 46	38.27	38.17	40.28	38.62
LOWER SPINE (g's)	15 - 22	19.6	18.55	21.81	21.2
PELVIS IMPACT					
TEMPERATURE (°C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	37	38	37	38
PROBE SPEED (m/s)	4.27 - 4.33	4.31	4.28	4.27	4.27
PELVIS (g's)	40 - 60	44.61	43.89	42.12	42.12

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

STD H3 NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 2
Date: May 2, 2003 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 2
 Date: April 24, 2003 Laboratory Technician: B. Swiecicki

DAMPER IDENTIFICATION: _____

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	35.0
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	997.8
	DISPLACEMENT (mm)	30 - 35	32.2
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1909.7
	DISPLACEMENT (mm)	32 - 37	35.0
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4336.4
	DISPLACEMENT (mm)	33 - 40	37.9

DAMPER SETTING: 5 _____

REMARKS: None

Shock Test - Low at 3.05 m/s

Low Part 572F Shock Absorber Impact

Calibration Date: 04-24-03

Serial No: 015

Work File: 015SI.04-23-03

TEST RESULTS

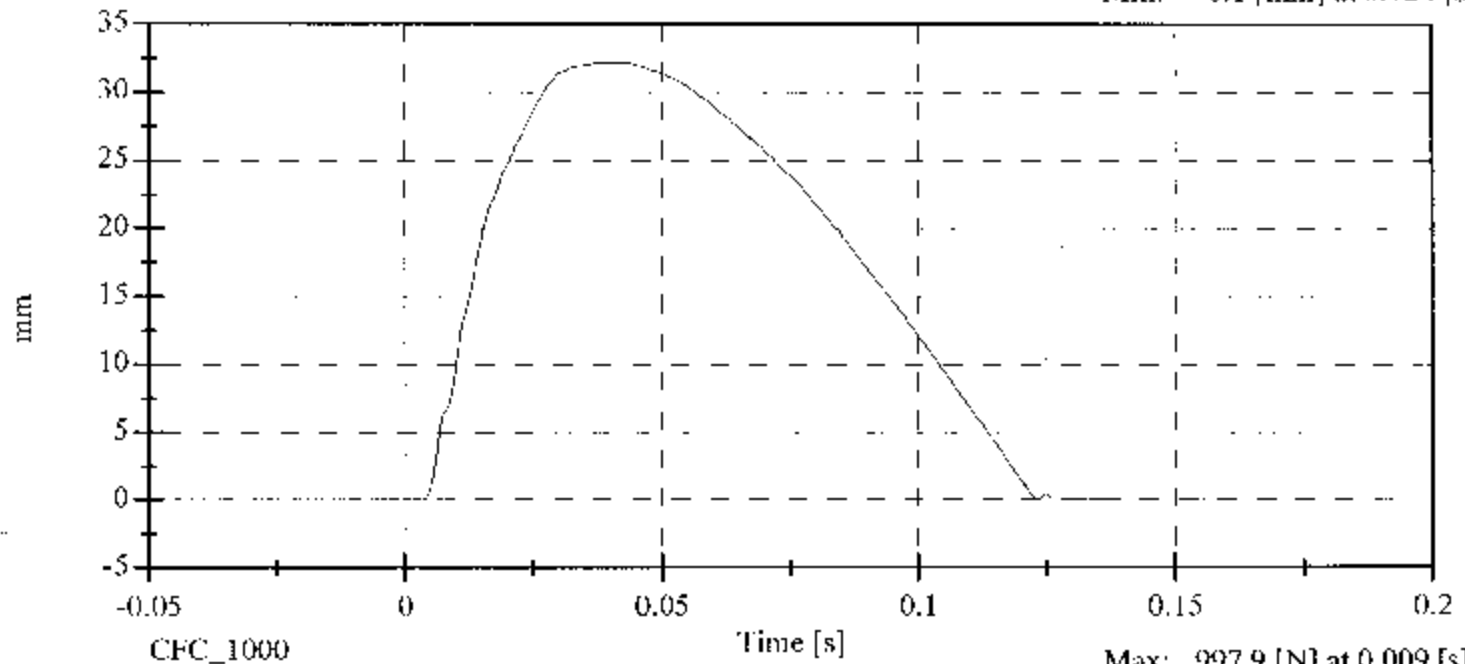
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	40-70 %	35.00 %	Passed
Displacement:	30.00-35.00 mm	32.18 mm	Passed
Maximum Force:	836.00-1125.00 N	997.85 N	Passed

Shock Test - Low

Displacement vs. Time

Max: 32.2 [mm] at 0.041 [s]

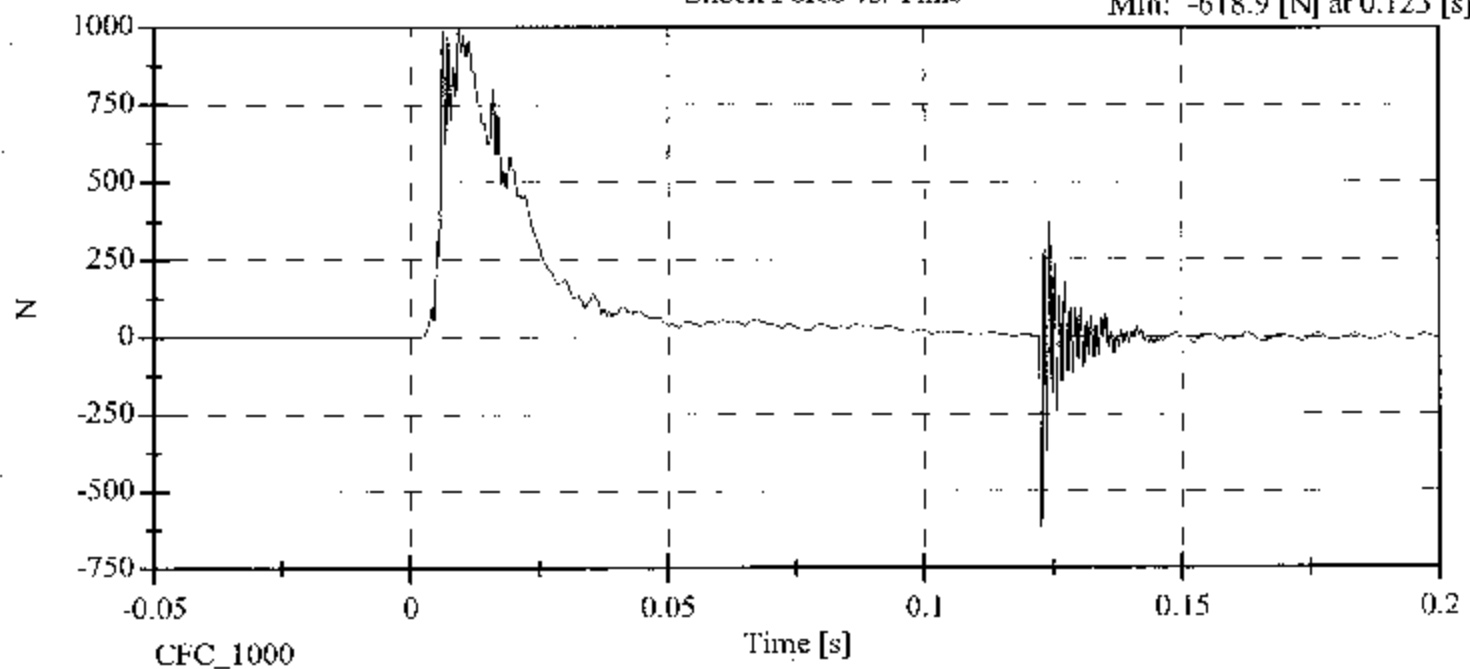
Min: -0.1 [mm] at 0.124 [s]



Shock Force vs. Time

Max: 997.9 [N] at 0.009 [s]

Min: -618.9 [N] at 0.123 [s]



Shock Test - Medium at 4.27 m/s

Medium Part 572F Shock Absorber Impact

Calibration Date: 04-24-03

Serial No: 015

Work File: 015SM 04-23-03

TEST RESULTS

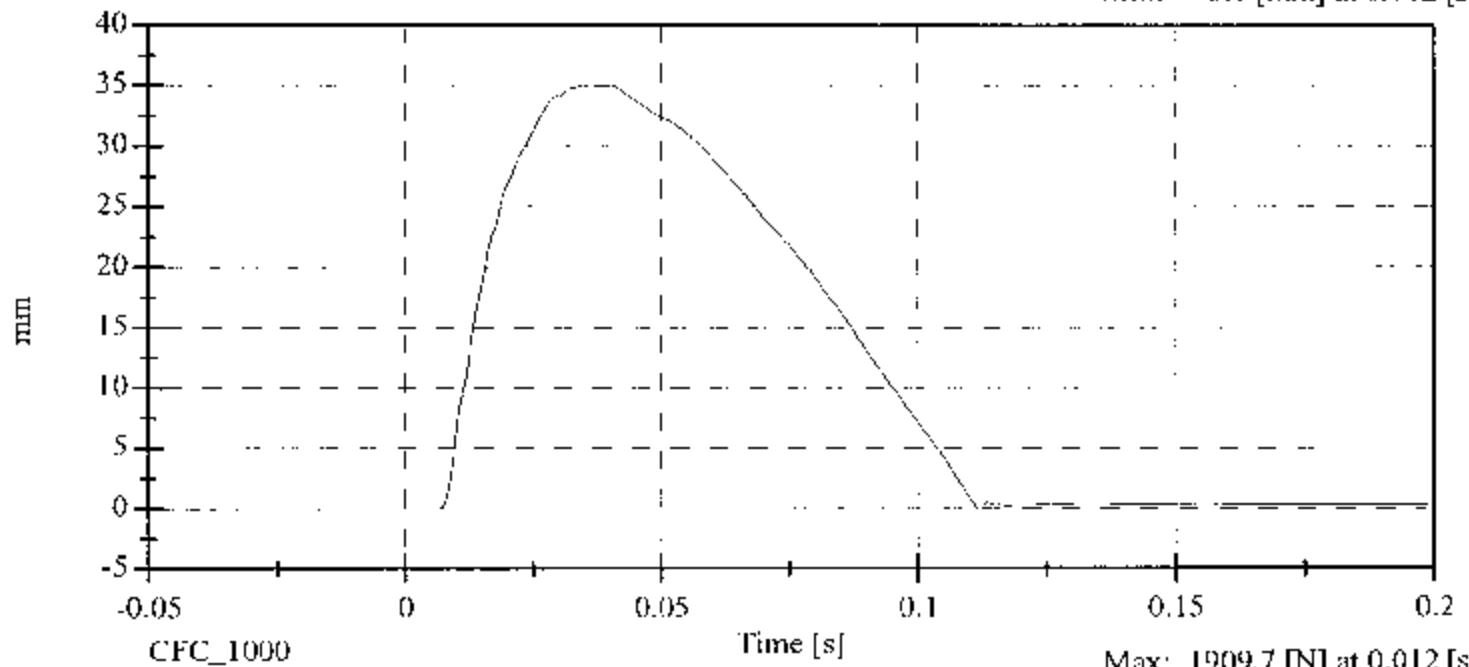
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Displacement:	32.00-37.00 mm	35.02 mm	Passed
Maximum Force:	1730.00-2099.00 N	1909.74 N	Passed

Shock Test - Medium

Displacement vs. Time

Max: 35.0 [mm] at 0.036 [s]

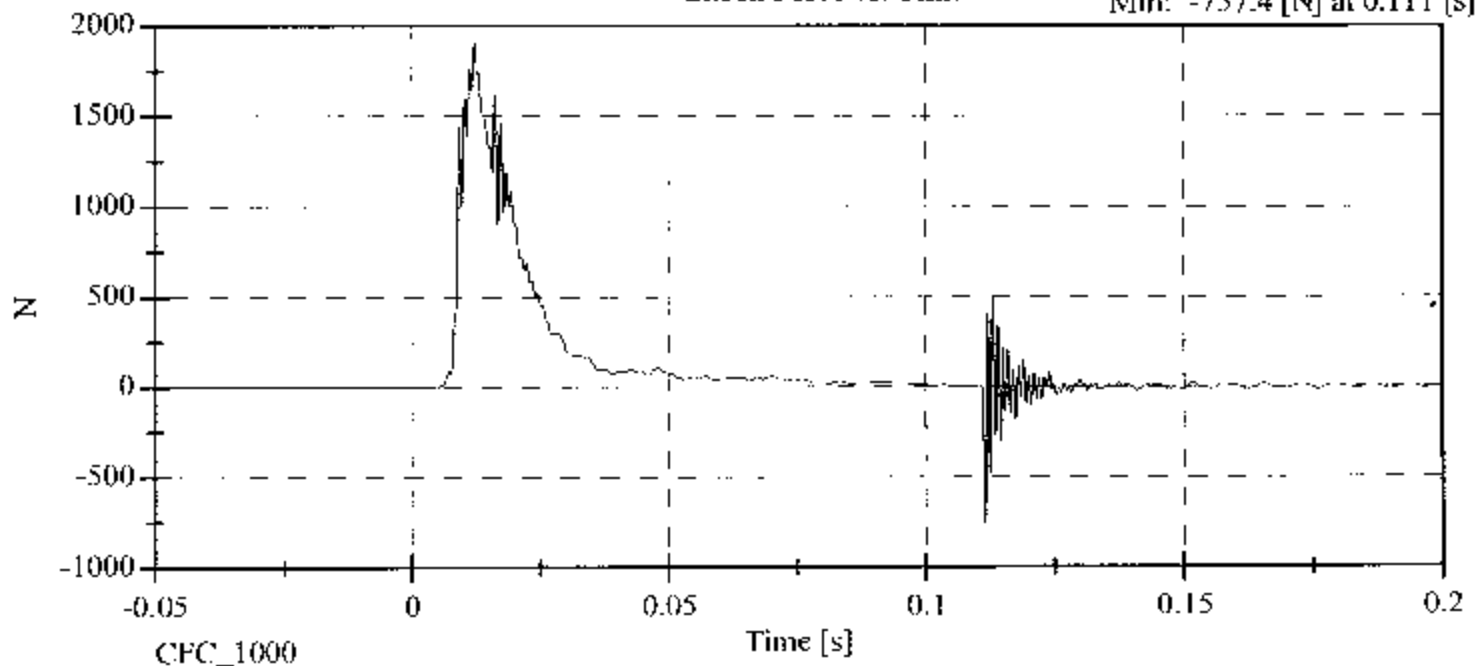
Min: -0.1 [mm] at 0.112 [s]



Shock Force vs. Time

Max: 1909.7 [N] at 0.012 [s]

Min: -757.4 [N] at 0.111 [s]



Shock - High at 6.10 m/s

High Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 015

Work File: 015SH2 04-23-03

TEST RESULTS

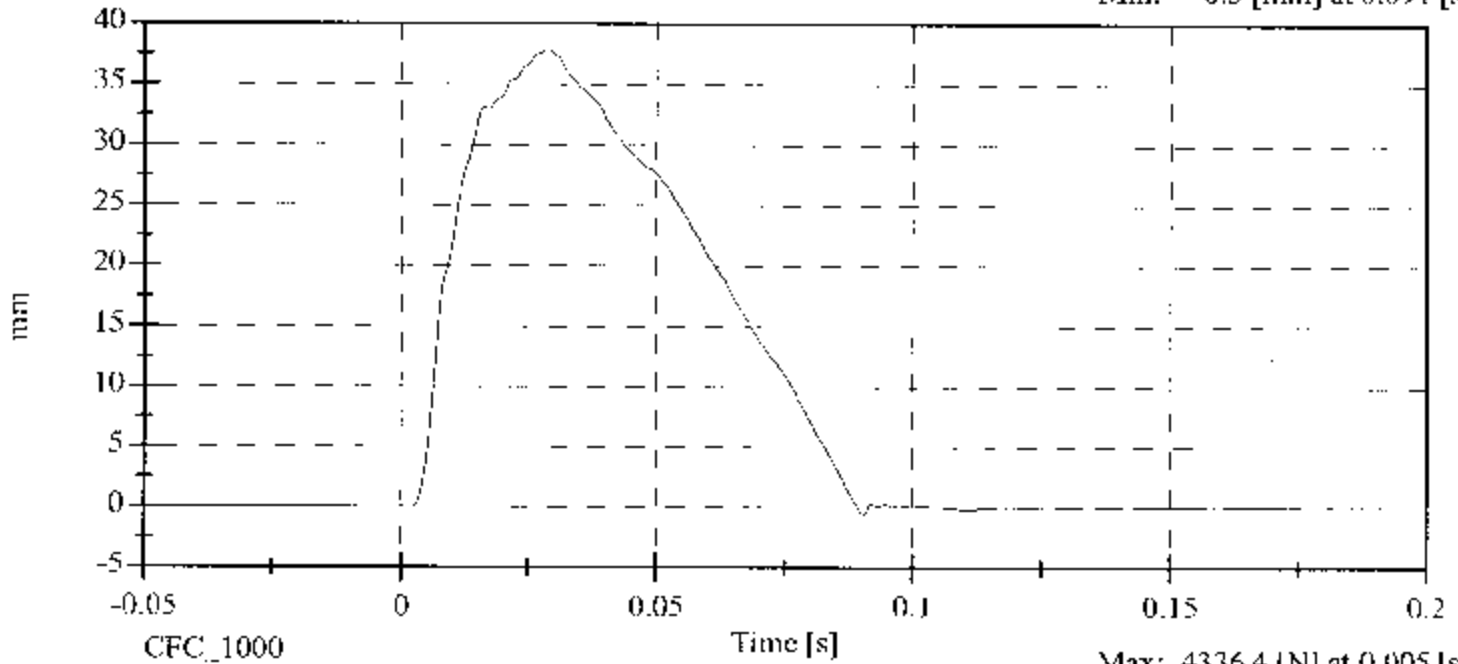
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	33.00-40.00 mm	37.86 mm	Passed
Maximum Force:	3741.00-4448.00 N	4336.39 N	Passed

Shock - High

Displacement vs. Time

Max: 37.9 [mm] at 0.029 [s]

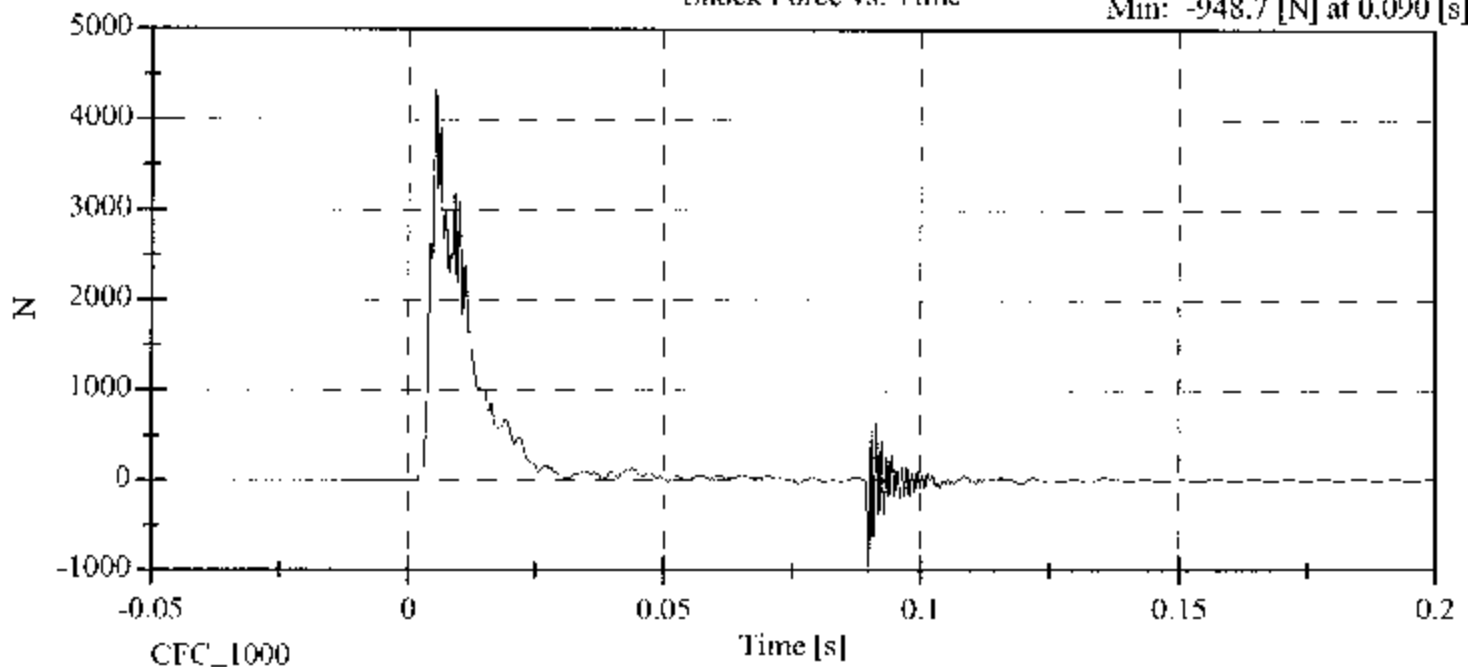
Min: -0.5 [mm] at 0.091 [s]



Shock Force vs. Time

Max: 4336.4 [N] at 0.005 [s]

Min: -948.7 [N] at 0.090 [s]



**LATERAL THORAX IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

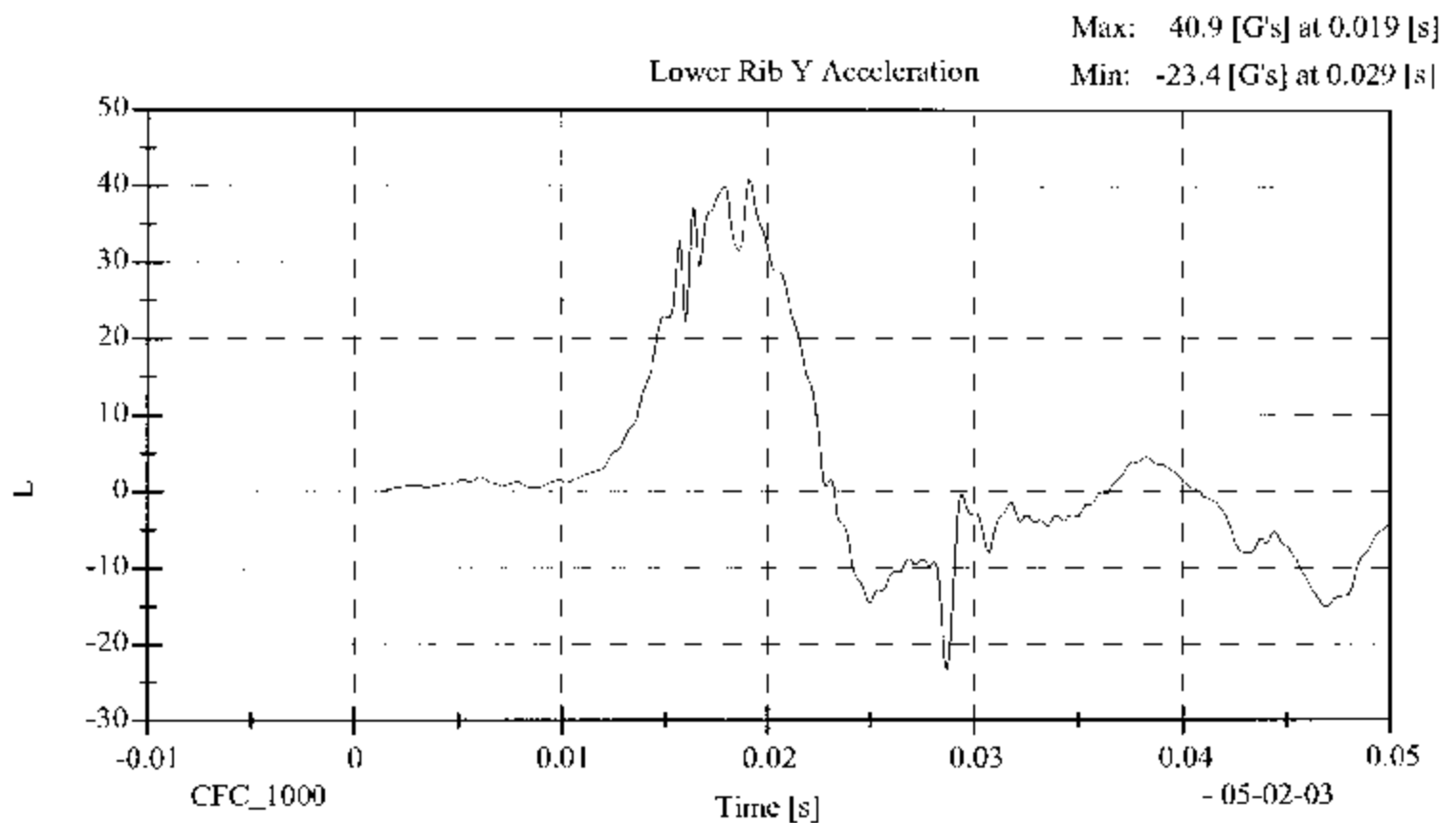
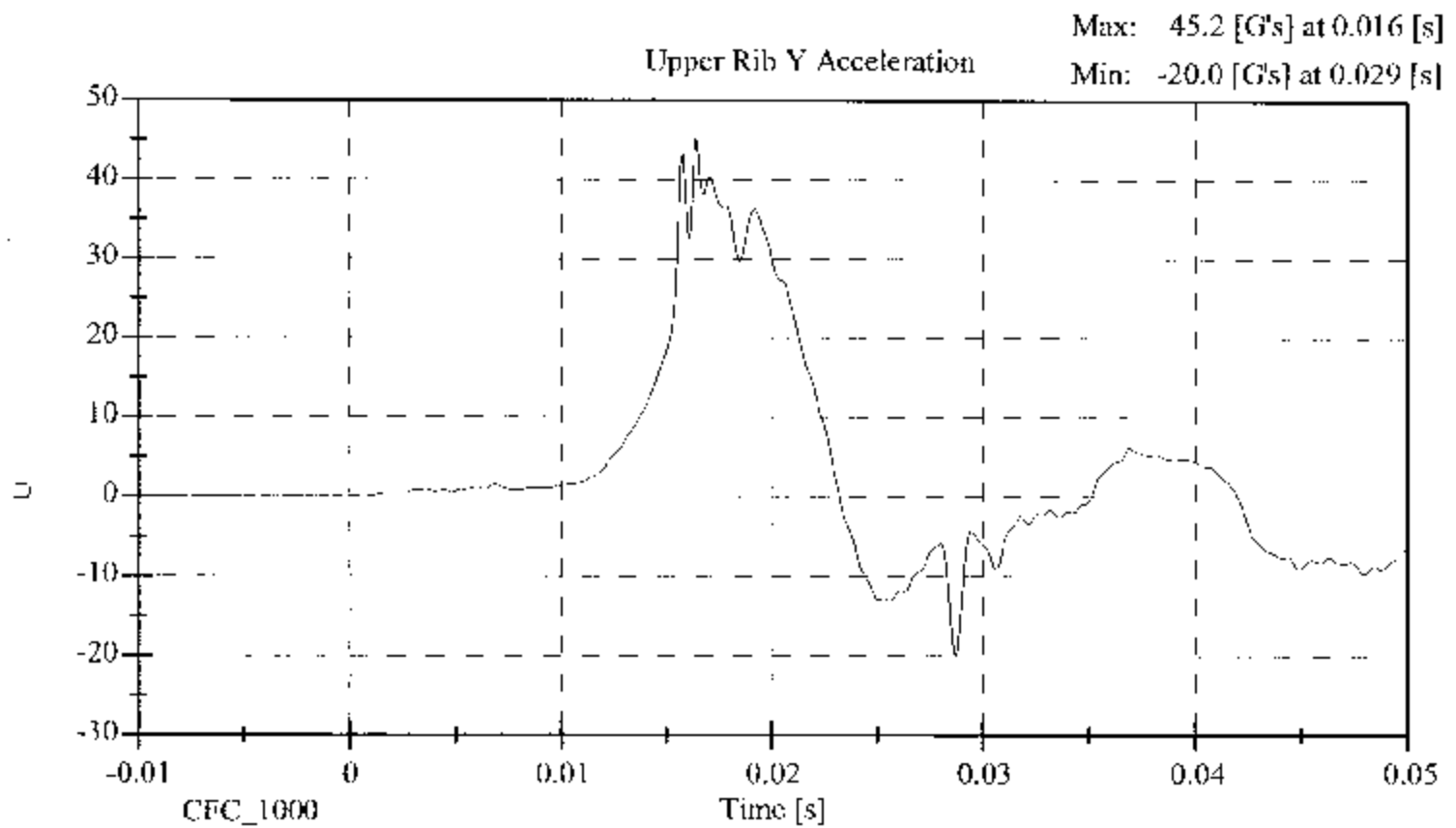
Date: May 2, 2003

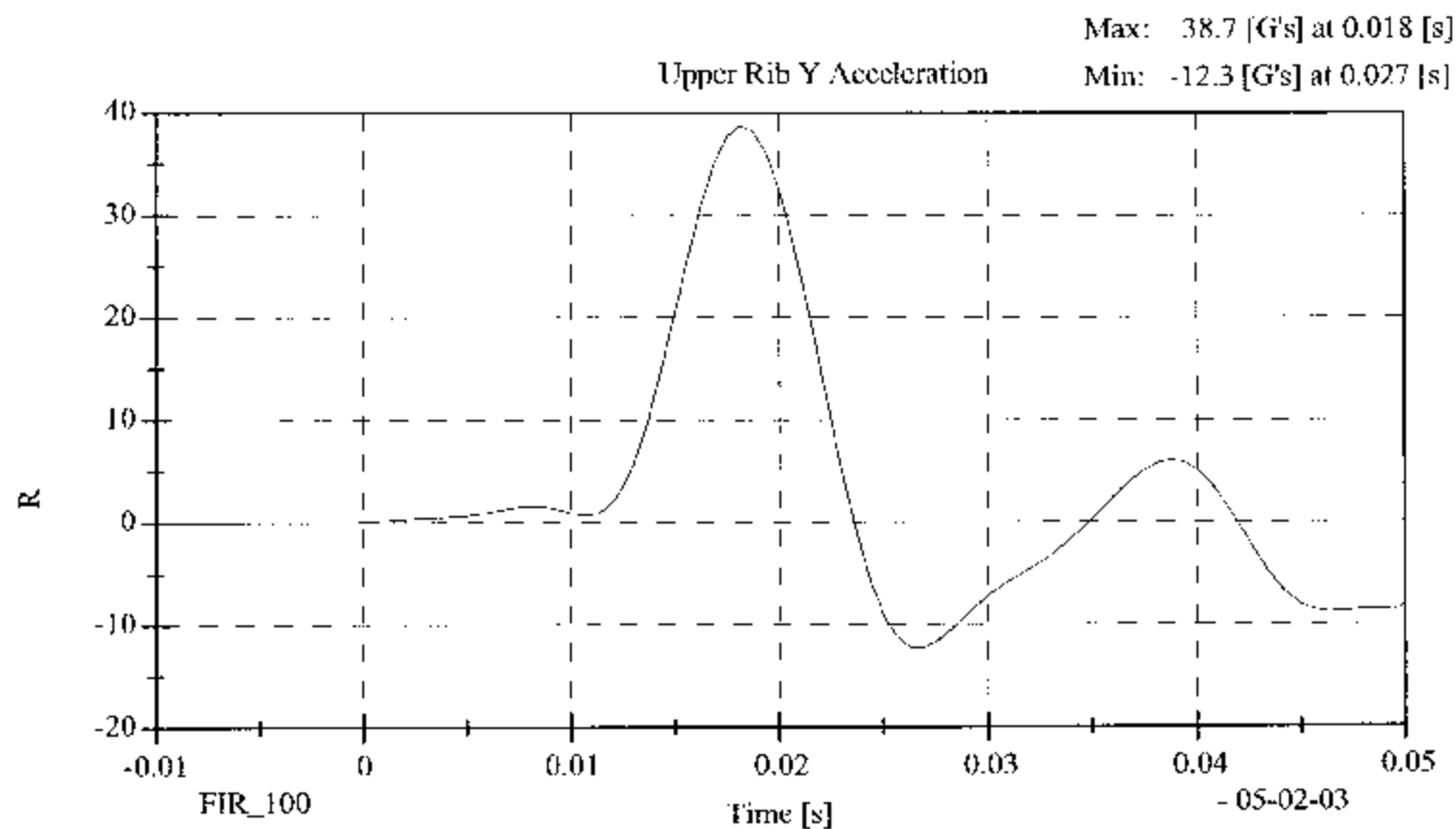
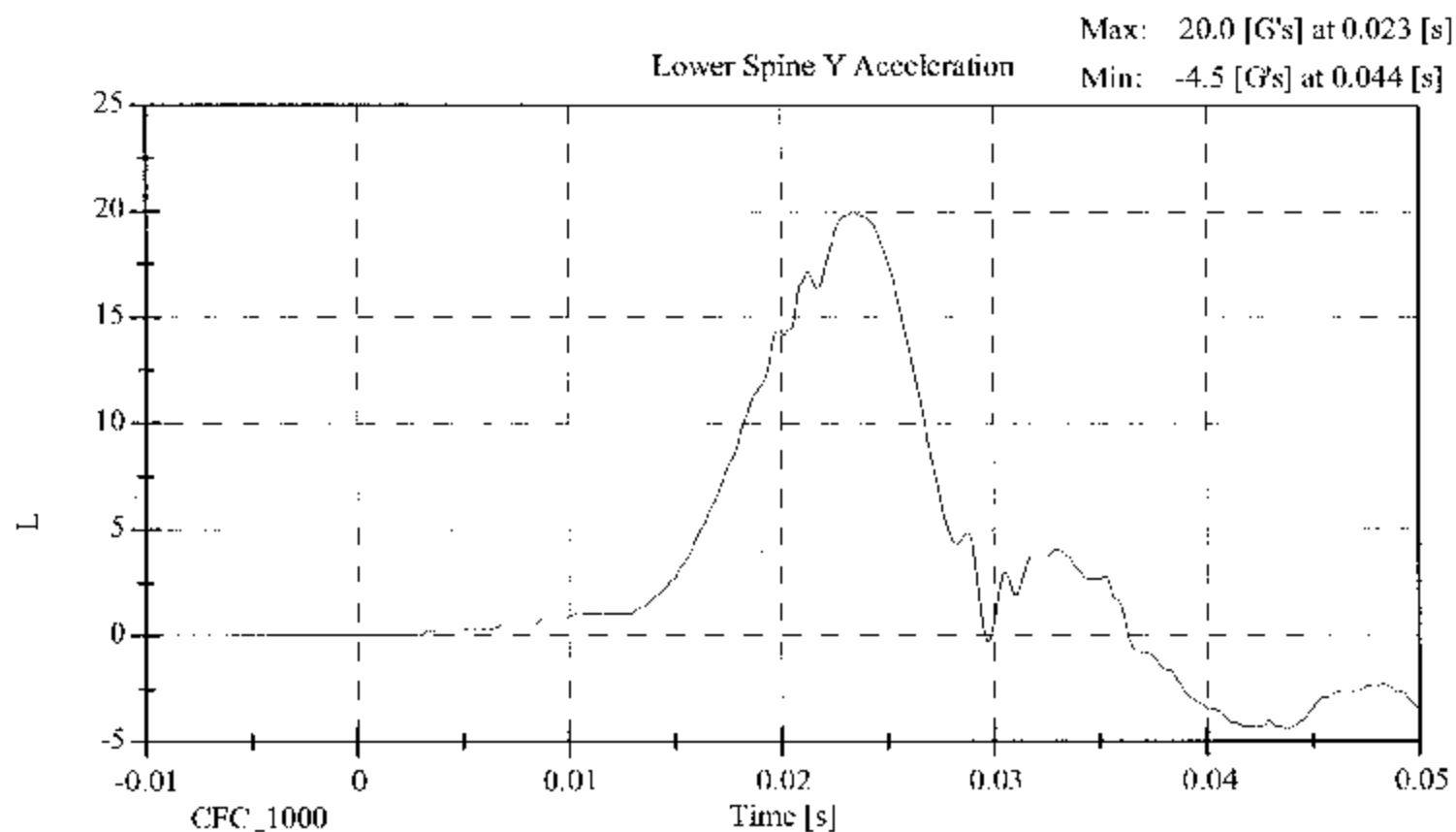
Laboratory Technician:

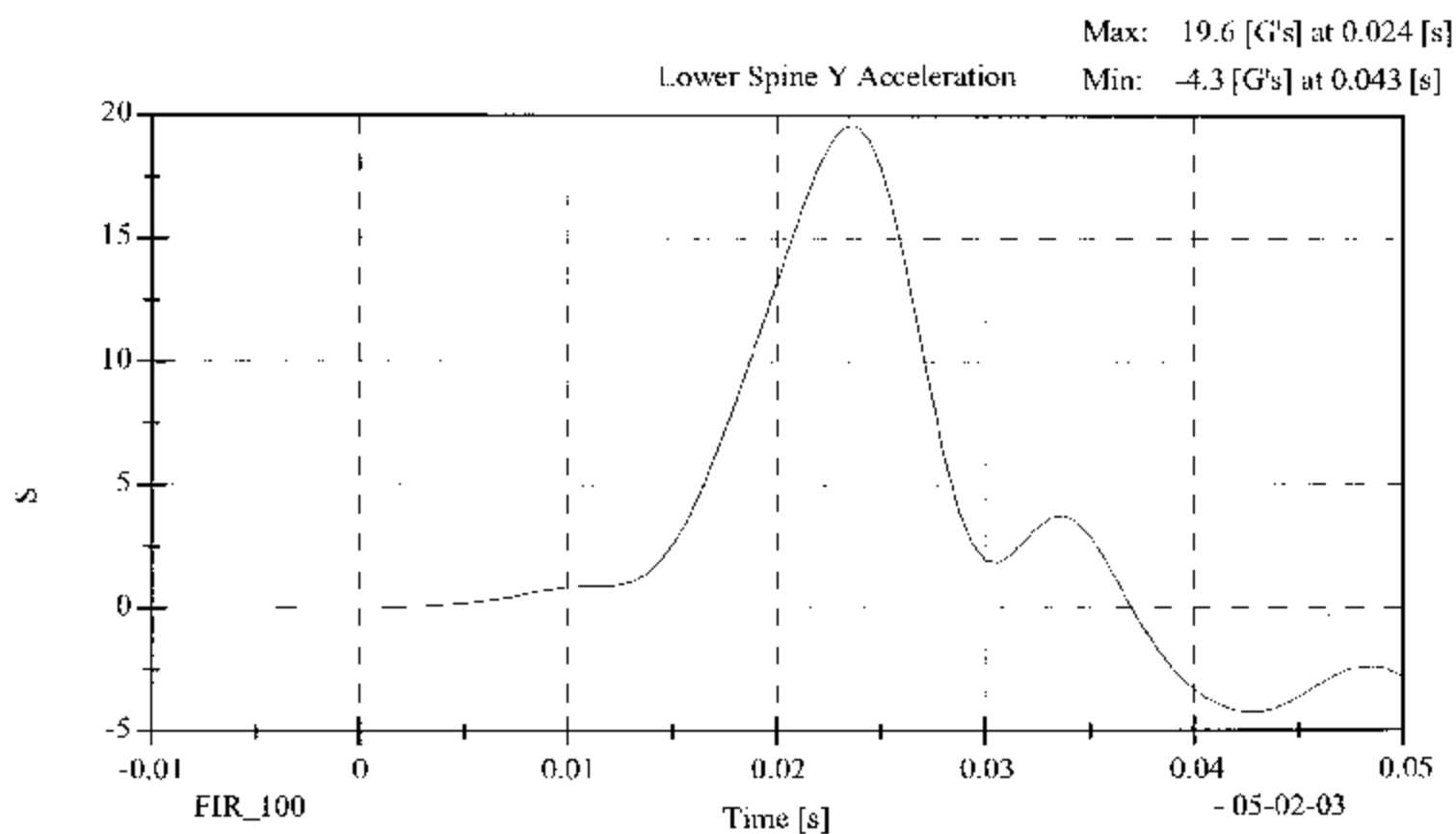
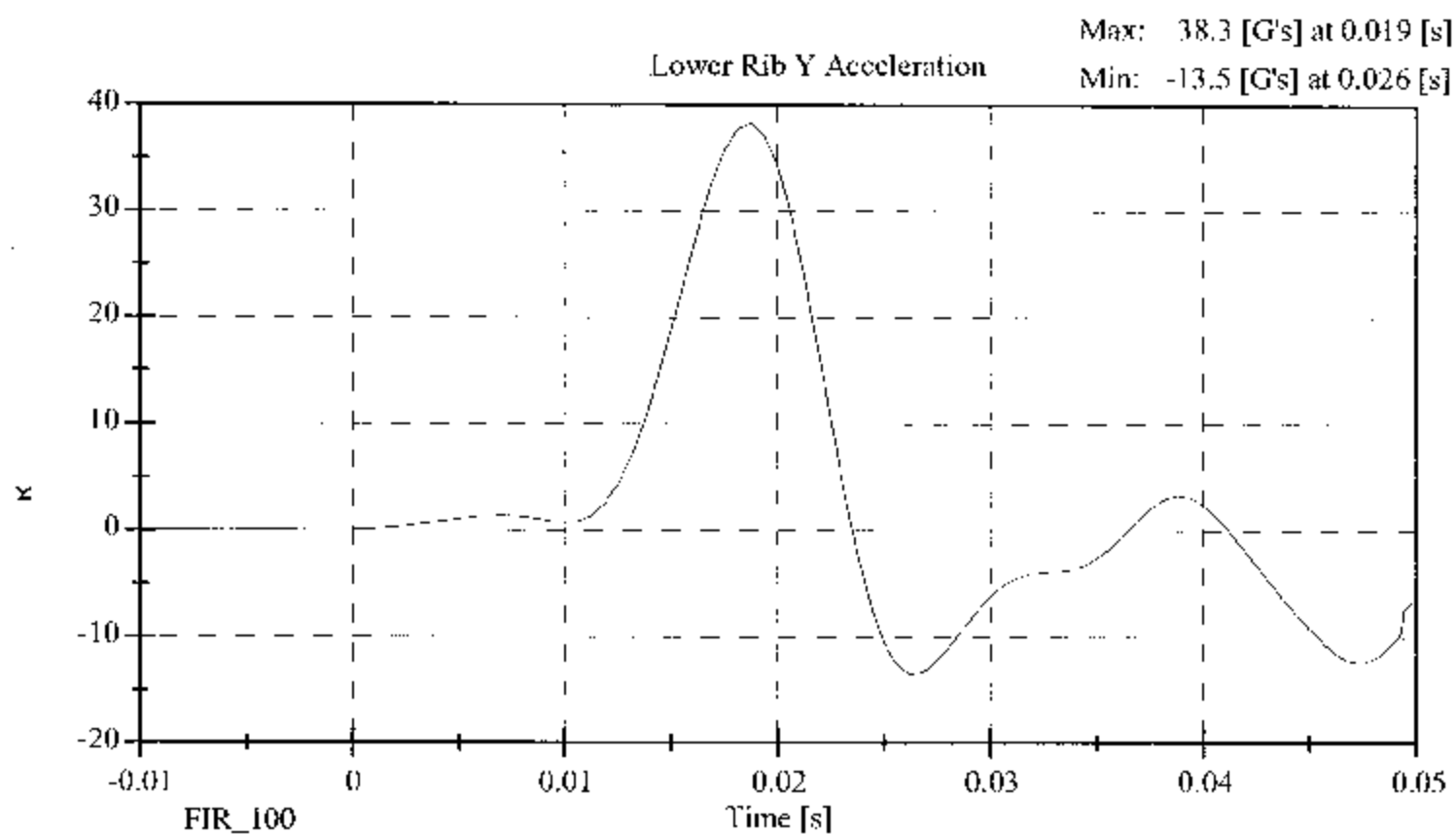
B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	38.69
LOWER RIB (g's)	37 - 46	38.27
LOWER SPINE (g's)	15 - 22	19.60

REMARKS: None







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SHD 113 Serial No.: 015

Sequential Test Number:

2

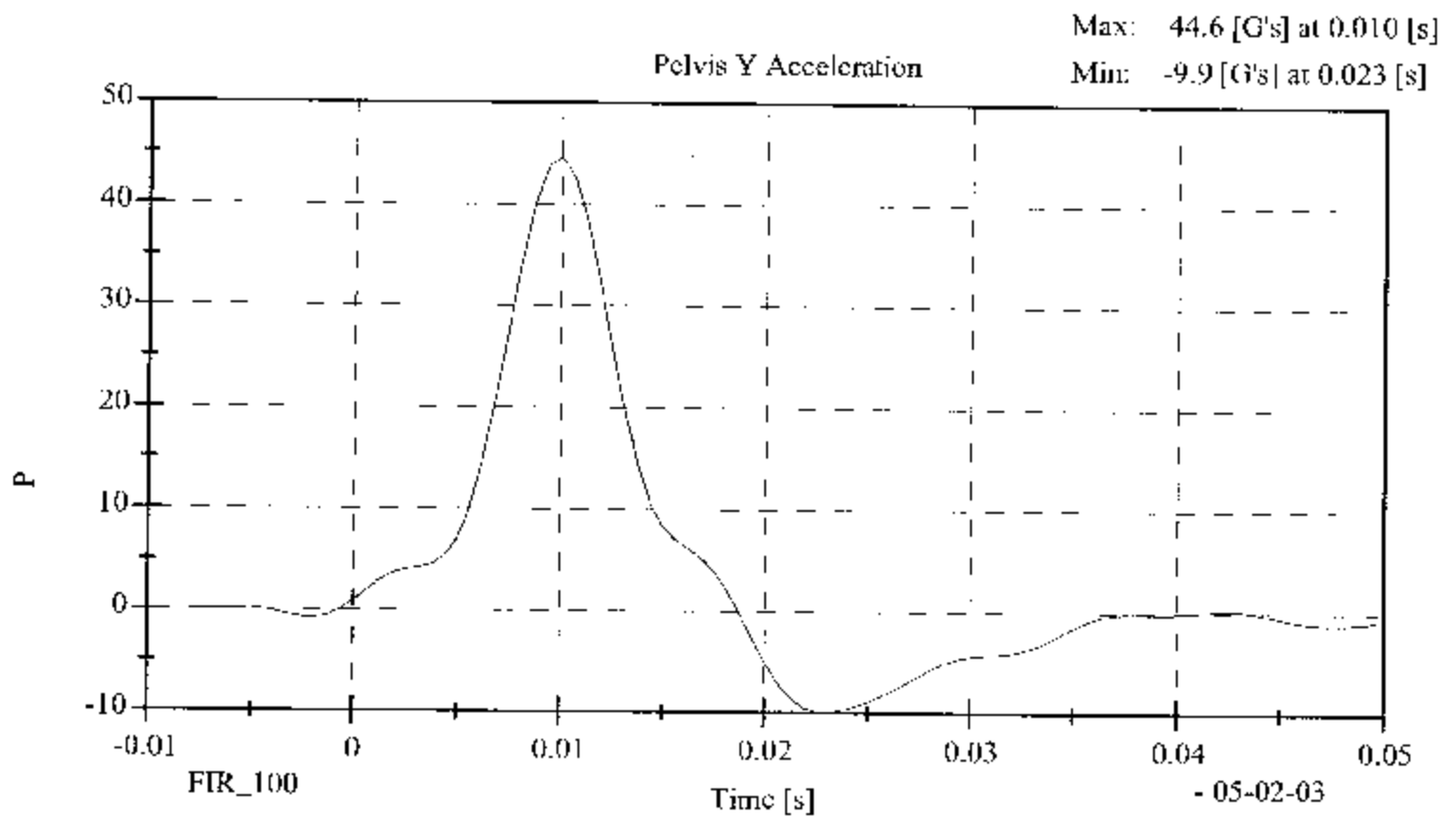
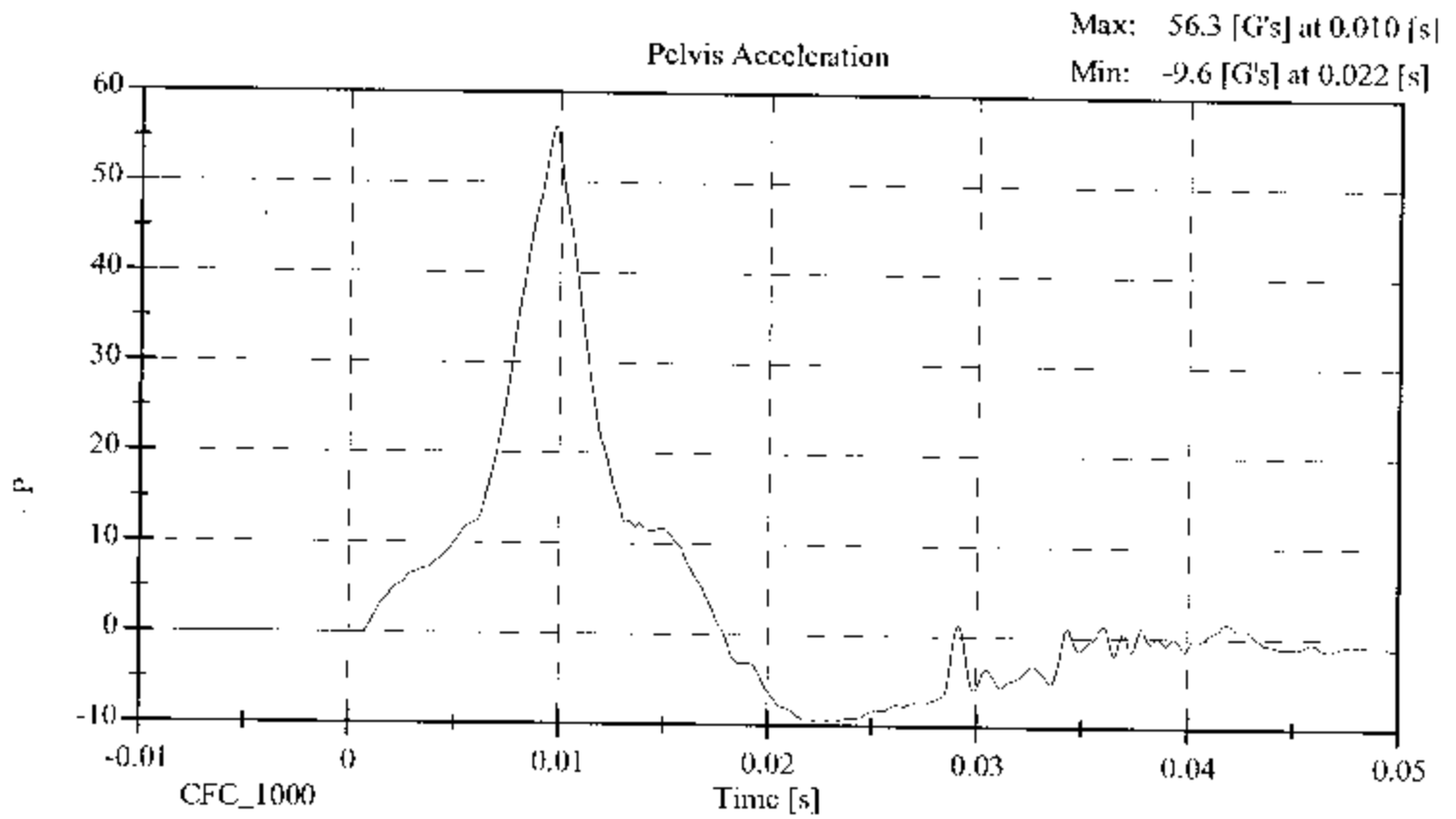
Date: May 2, 2003

Laboratory Technician:

B. Swieczeki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.31
PELVIS ACCELERATION (g's)	40 - 60	44.61

REMARKS: None



**HEAD DROP TEST
PRE-TEST**
(Test not required for SID certification)

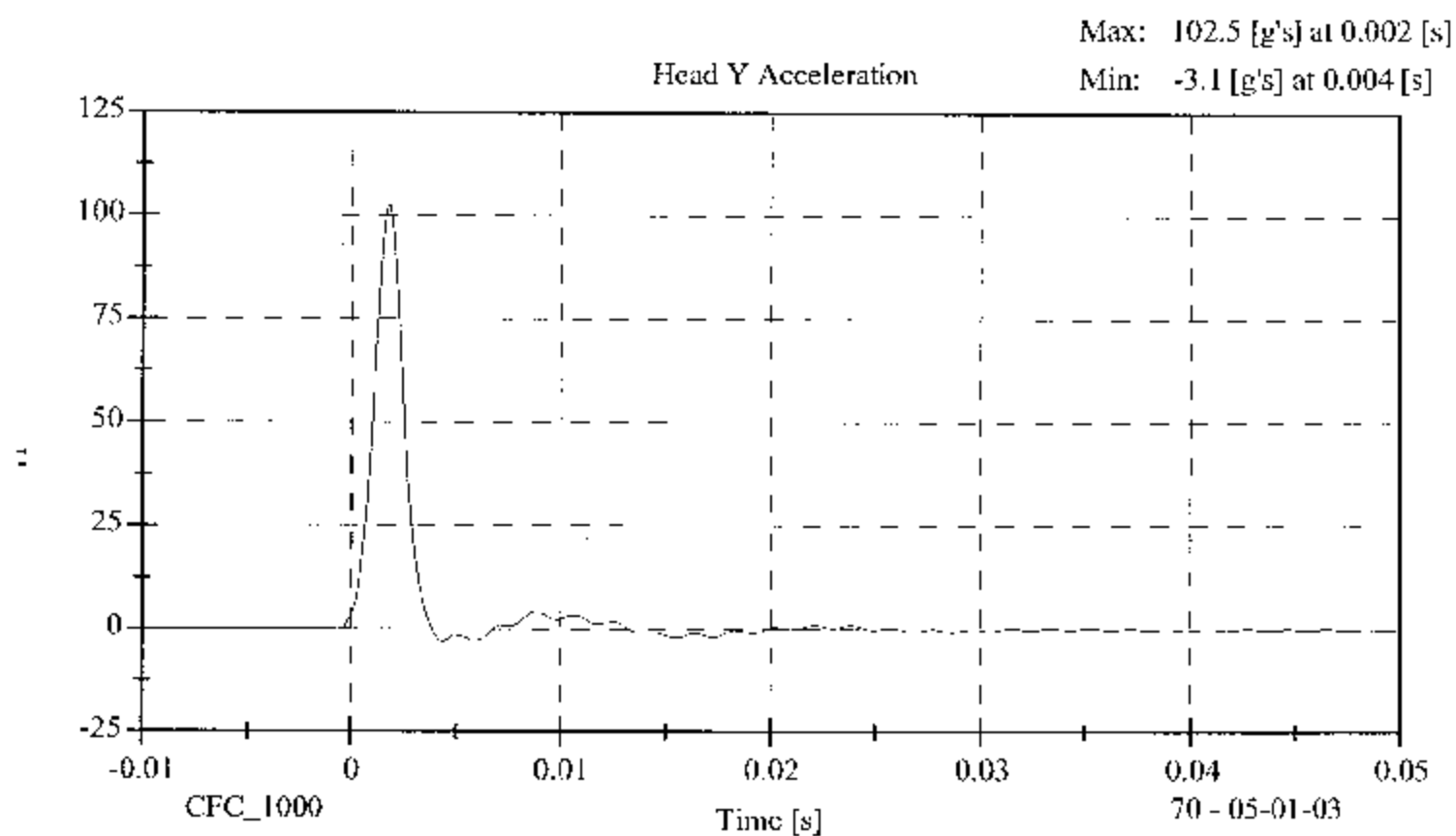
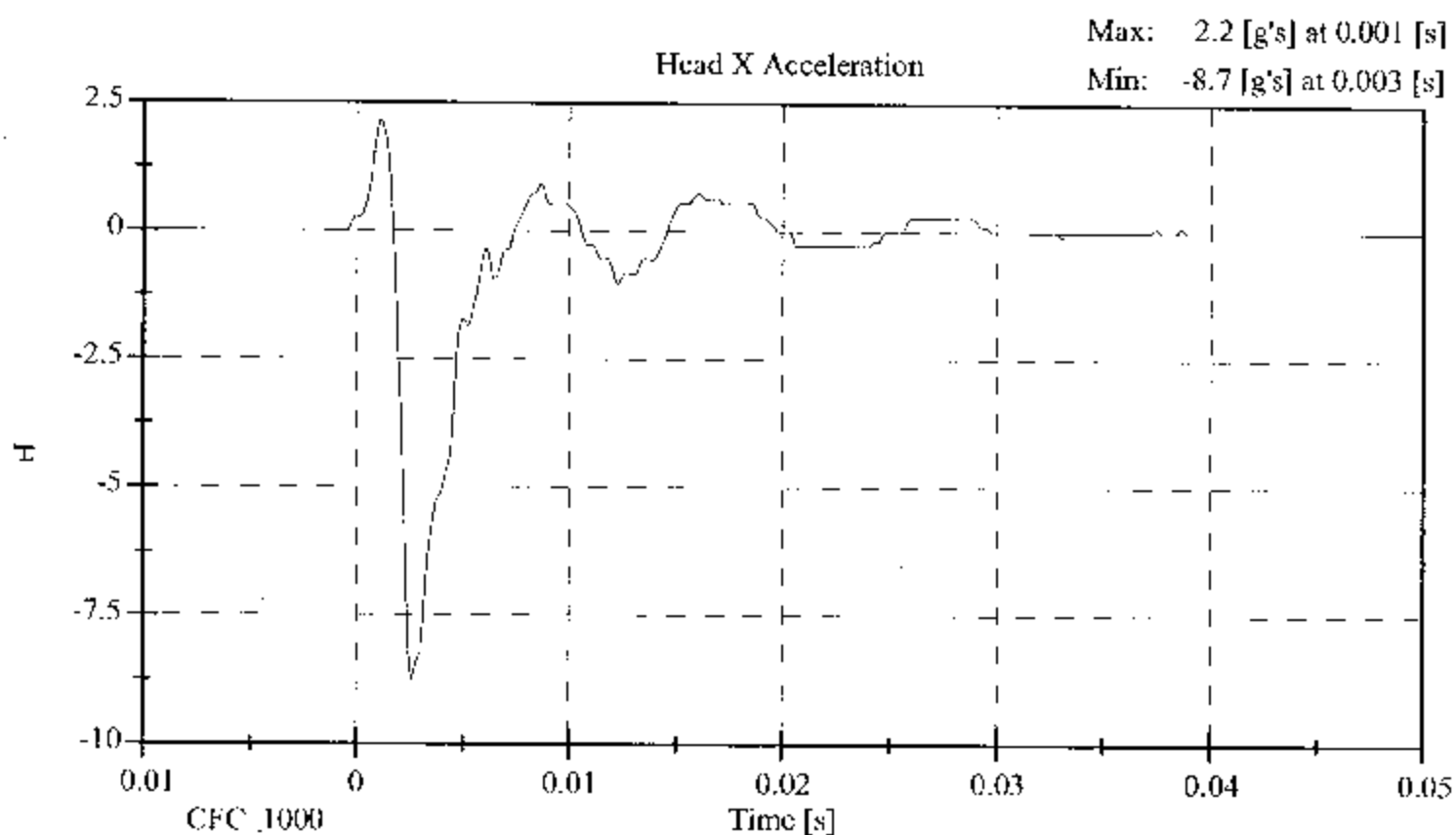
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 2
Date: May 1, 2003 Laboratory Technician: B. Swiecicki

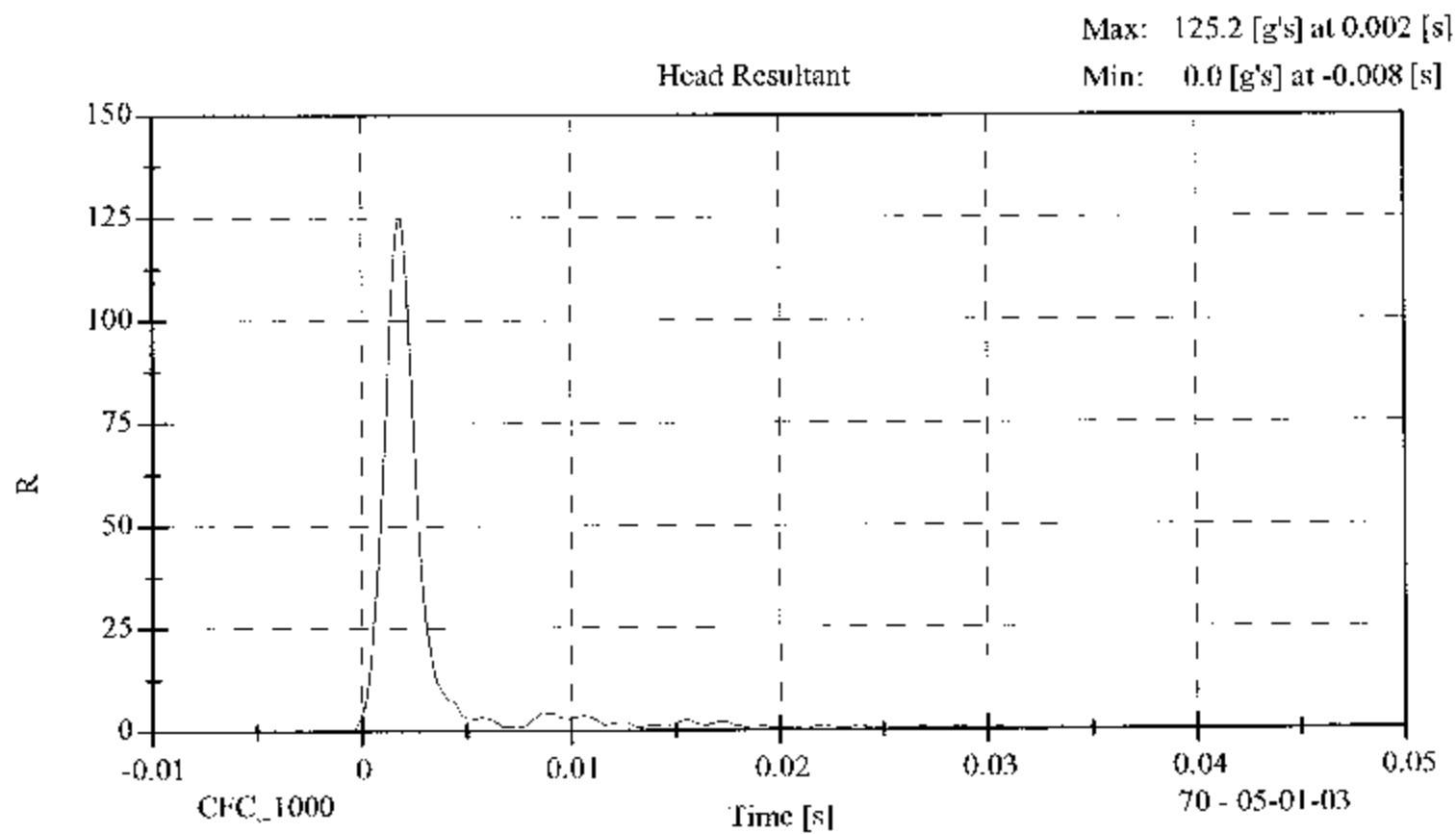
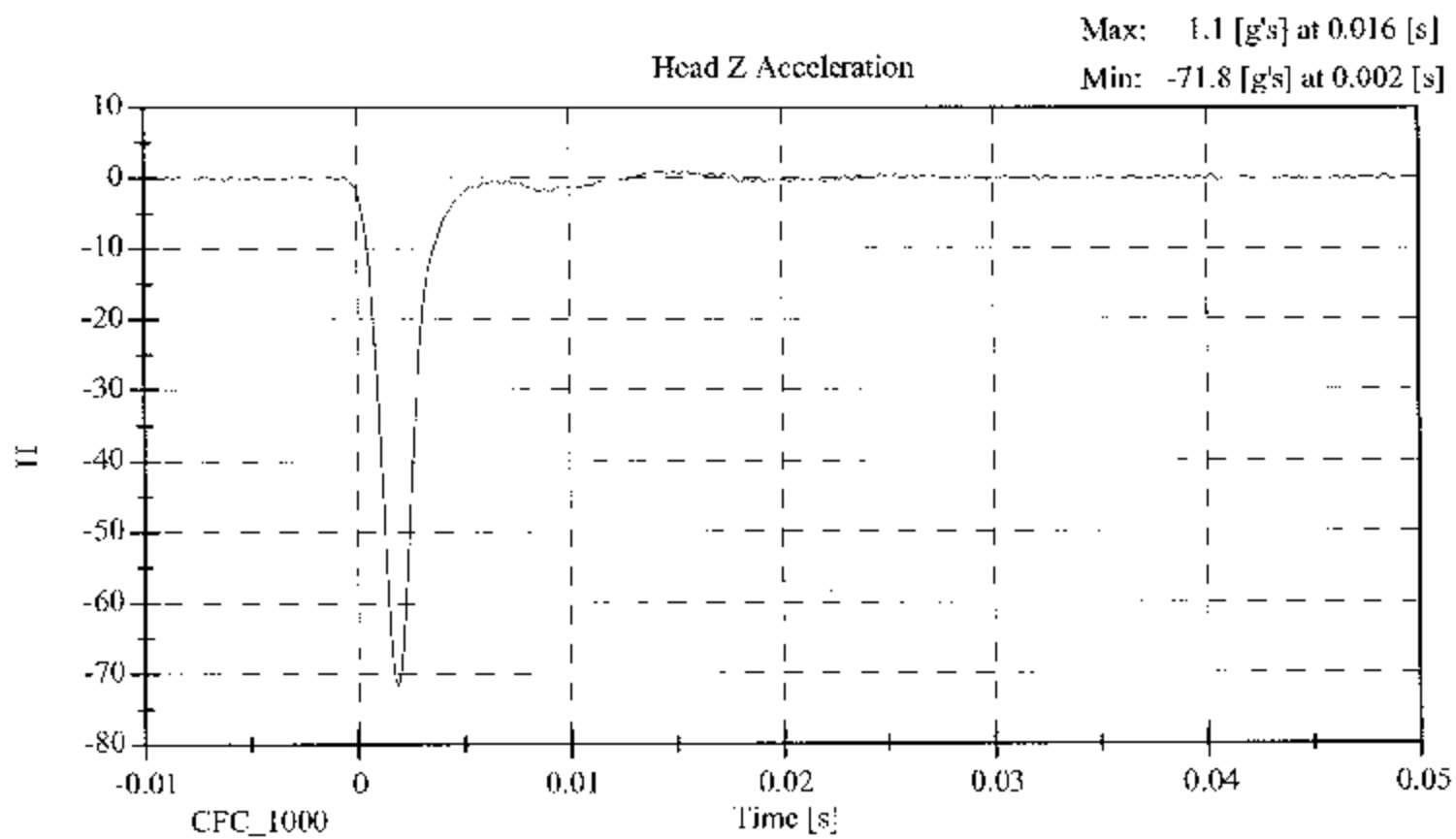
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 – 22.2	21.1
RELATIVE HUMIDITY (%)	10 – 70	41.0
PEAK RESULTANT ACCELERATION (Gs)	120 – 150	125.17
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	2.15
CURVE PERCENT NONMODAL (%)	< 15	3.69

REMARKS: None

015 Head Drop



015 Head Drop



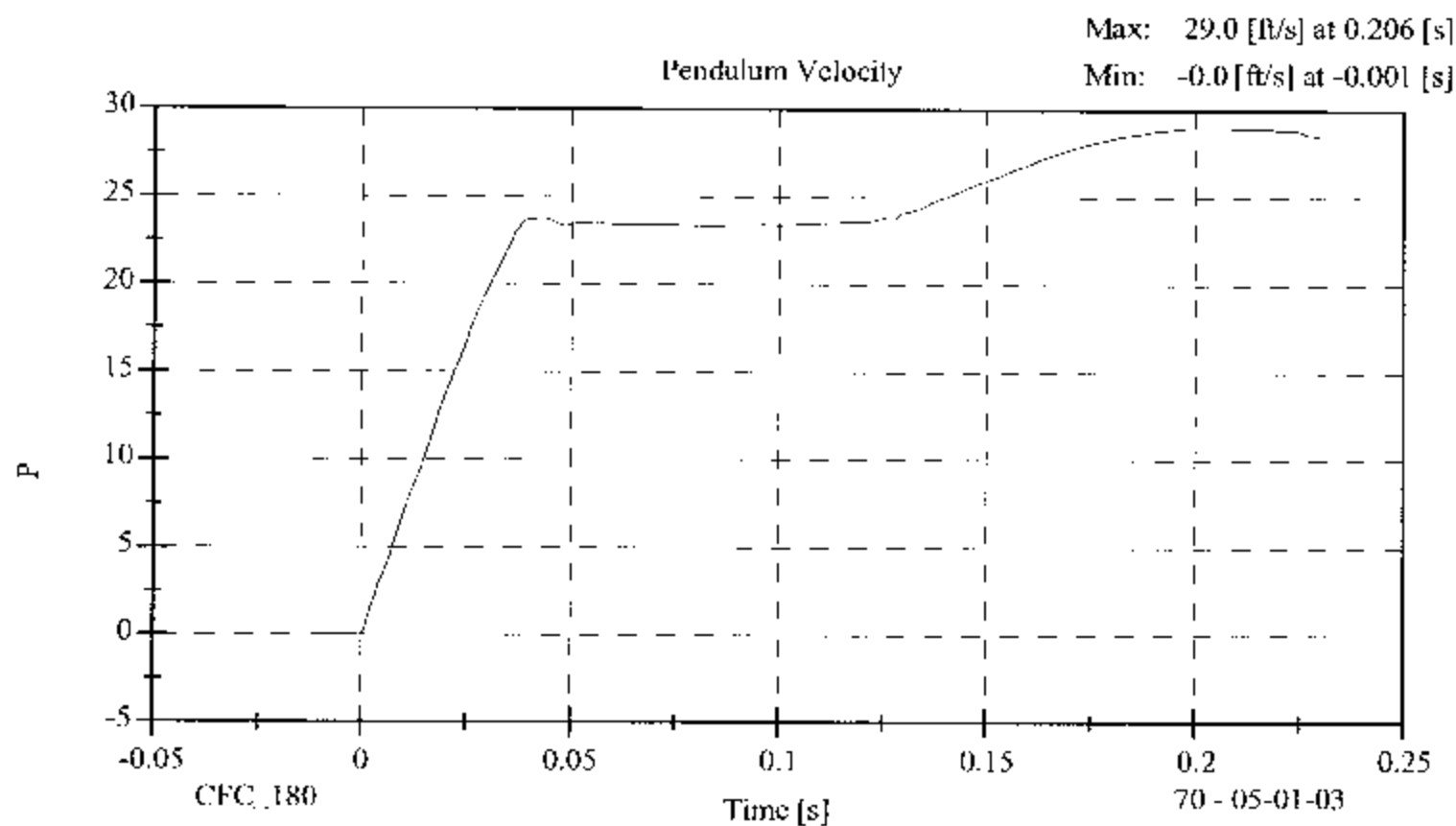
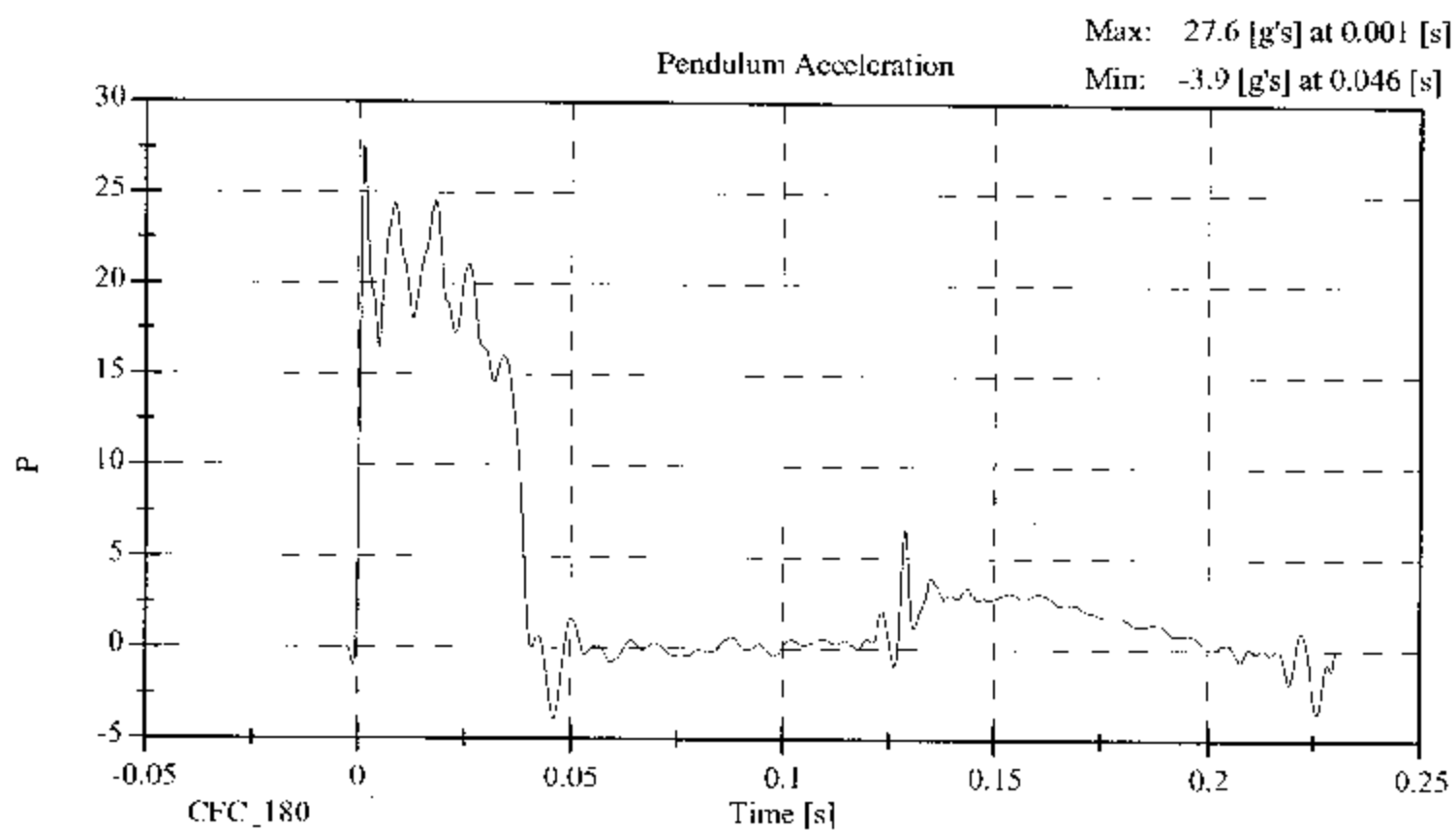
LATERAL NECK BENDING TEST
PRE-TEST
 (Test not required for SID certification)

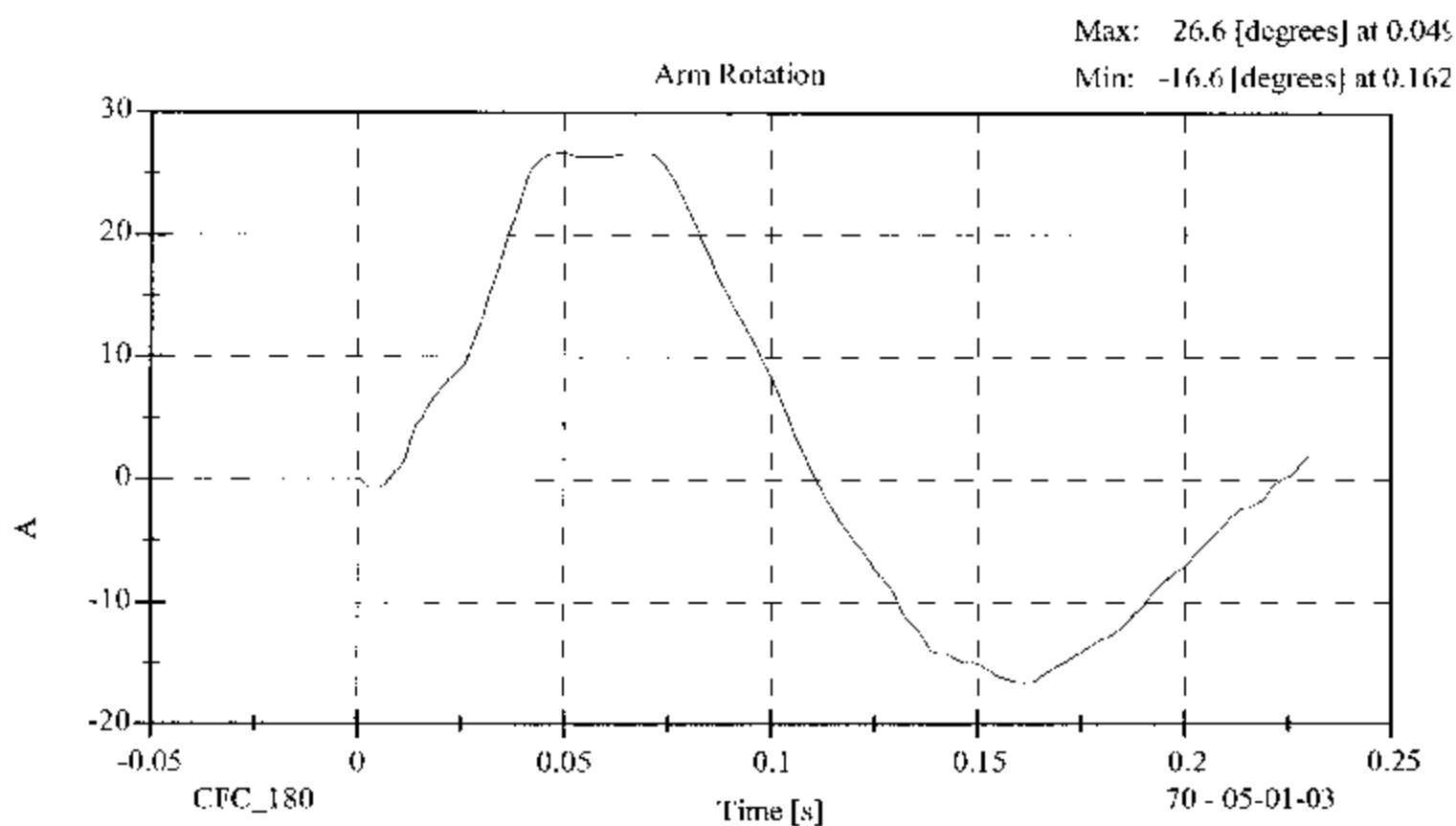
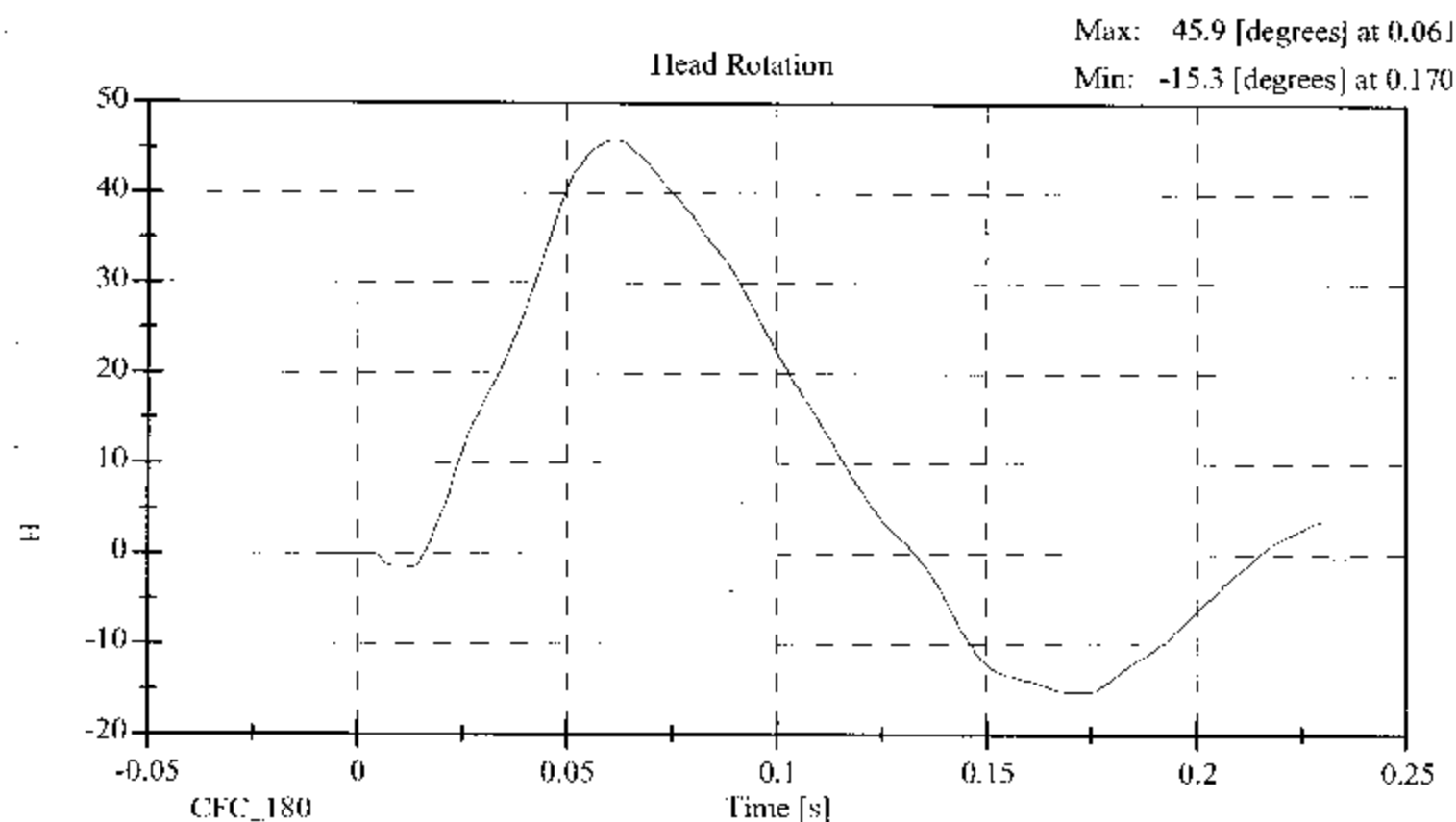
CONFIGURED FOR LEFT SIDE IMPACT

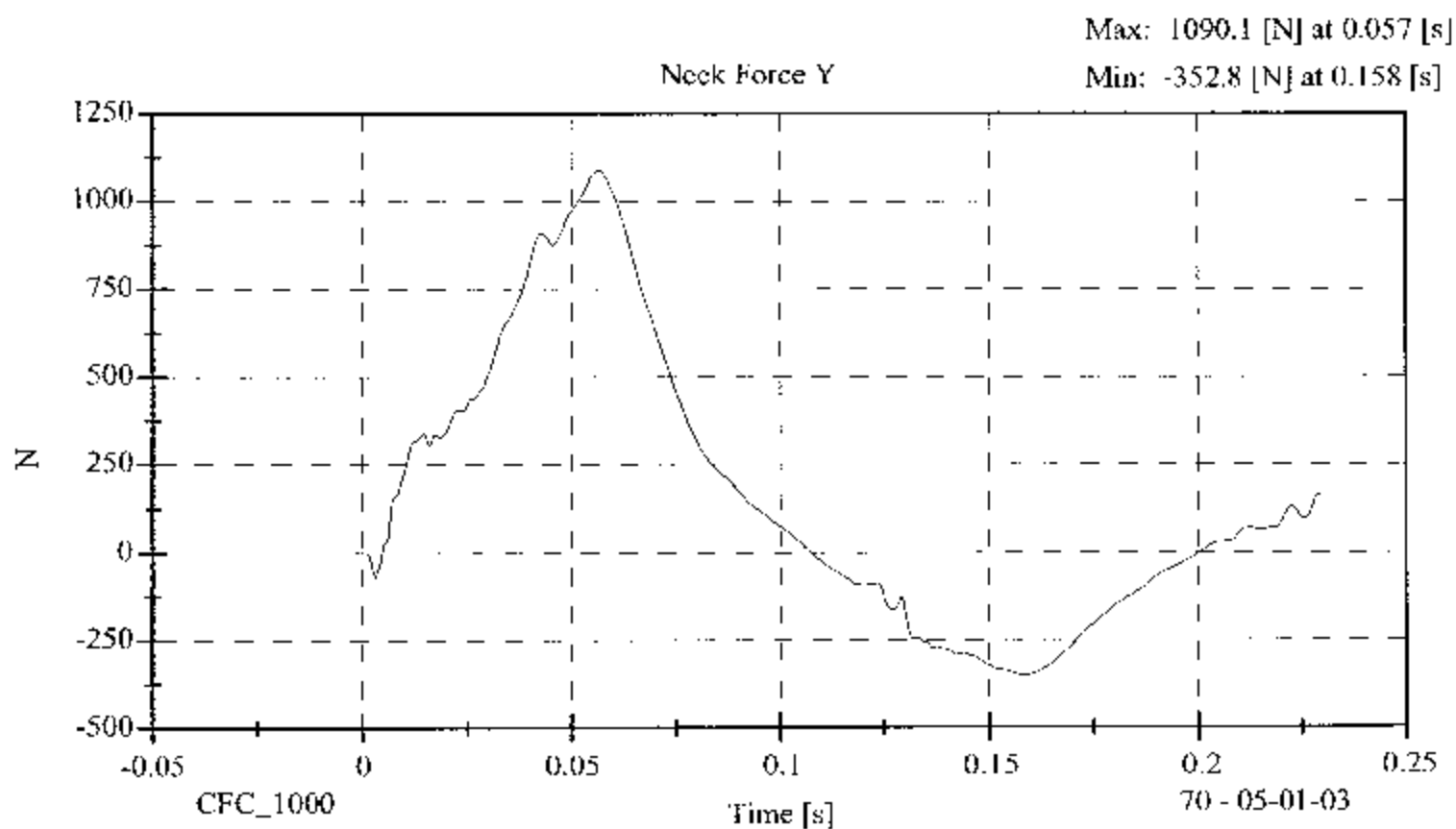
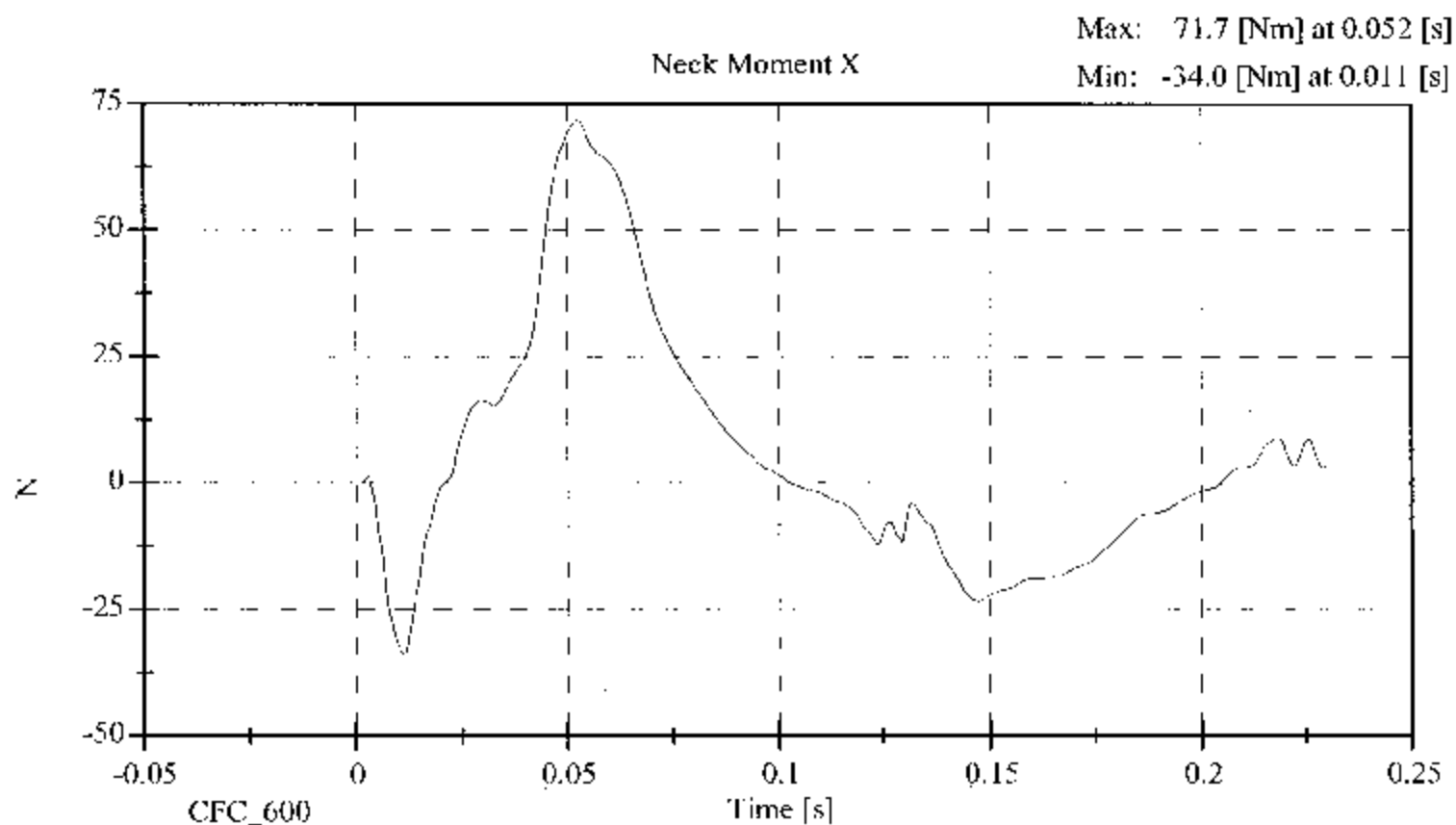
SID Serial No.: 015 Sequential Test Number: 2
 Date: May 1, 2003 Laboratory Technician: B. Swieczicki

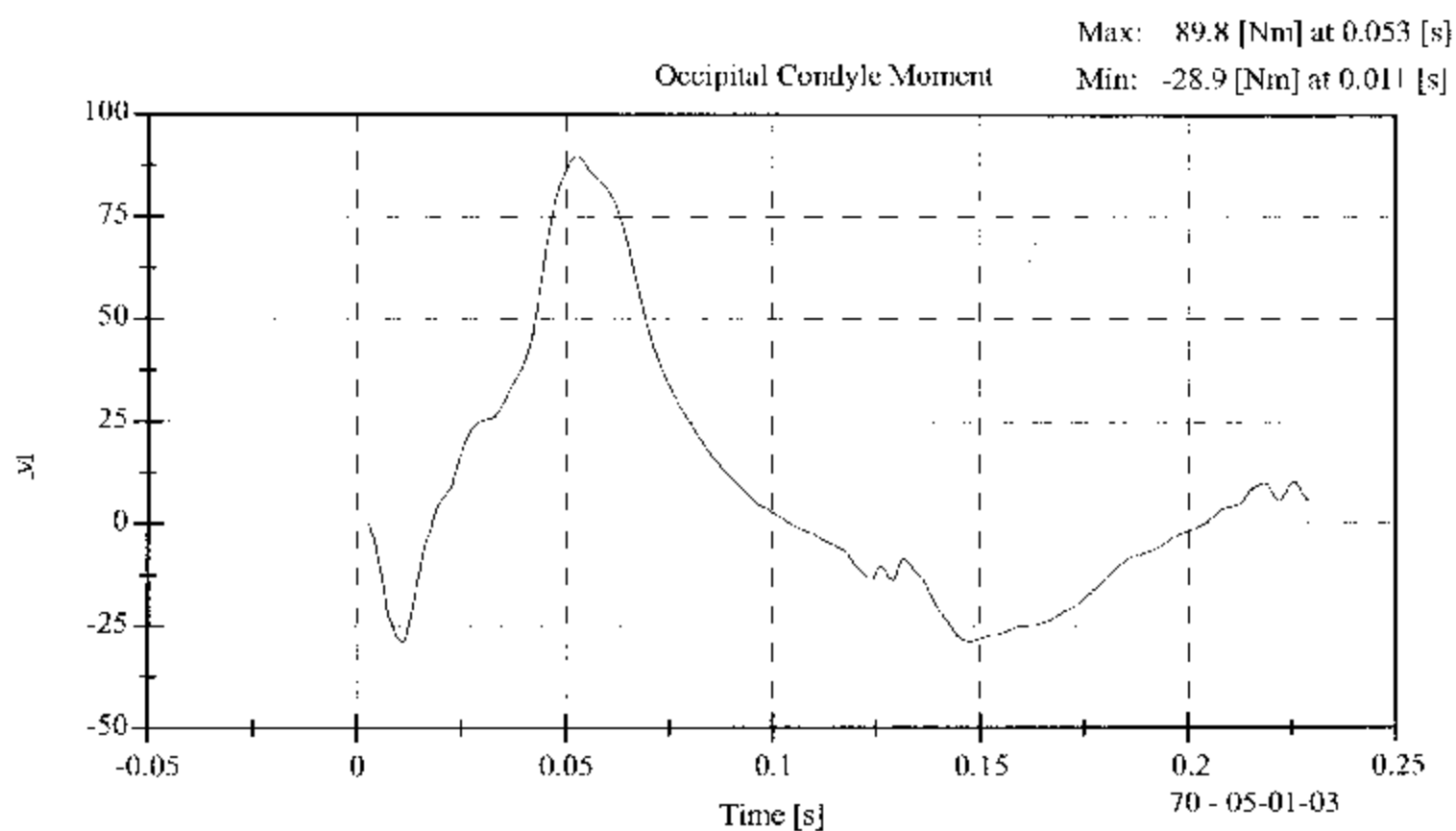
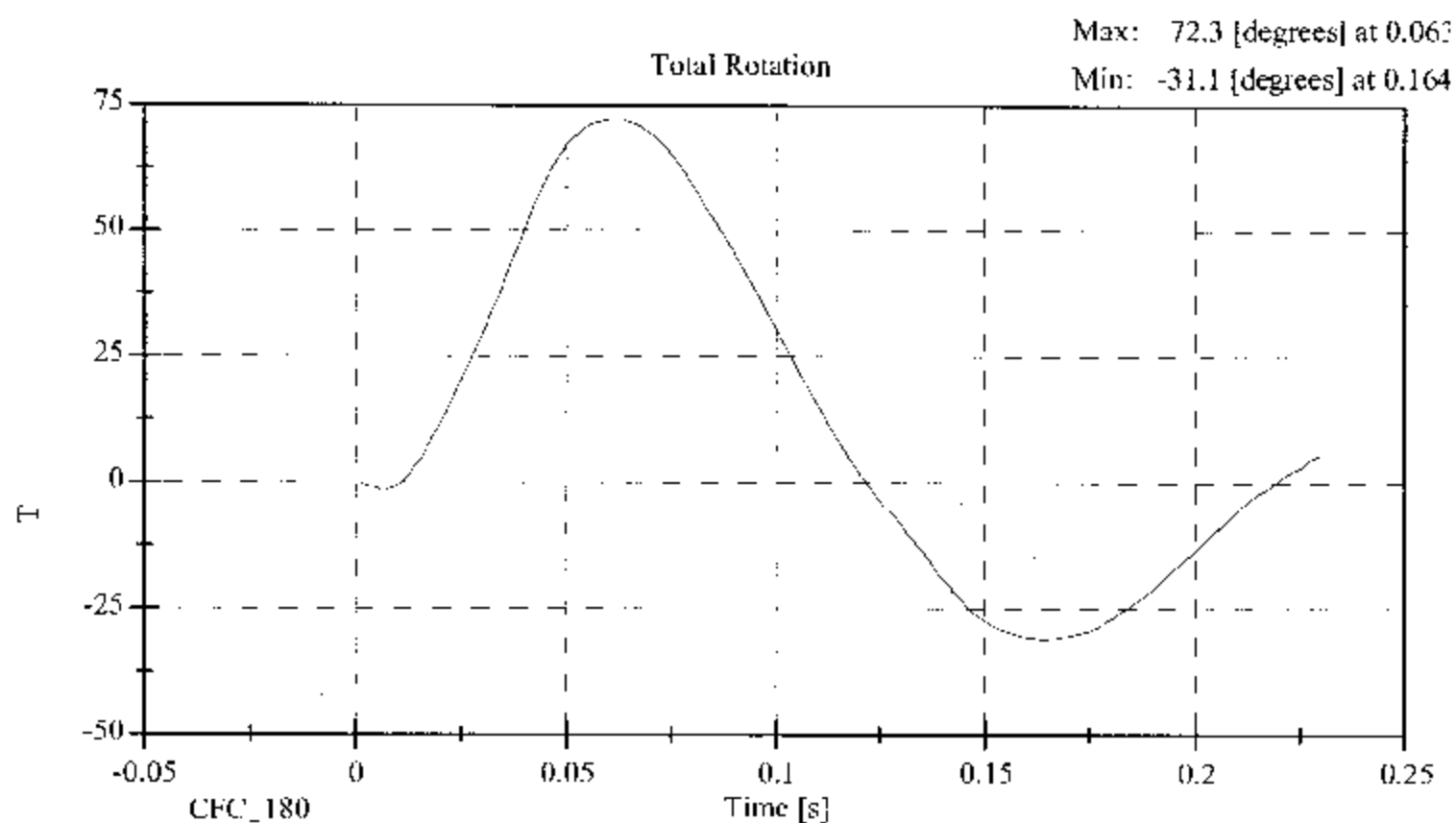
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.99
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.09
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.17
DELTA V @ 30 ms (m/s)	5.73 - 7.01	6.00
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.24
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	72.3
ROT. ANGLE TIME to ZERO (ms)	50 - 70	59.1
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	89.77
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	51.4
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	9.9

REMARKS: None









**ABDOMINAL COMPRESSION TEST
PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
FORCE @ 13 mm (N)	104 - 162	126.1
FORCE @ 19 mm (N)	163 - 221	187.7
FORCE @ 25 mm (N)	222 - 280	260.2
FORCE @ 33 mm (N)	325 - 391	371.4

REMARKS: None

Dummy S/N 015

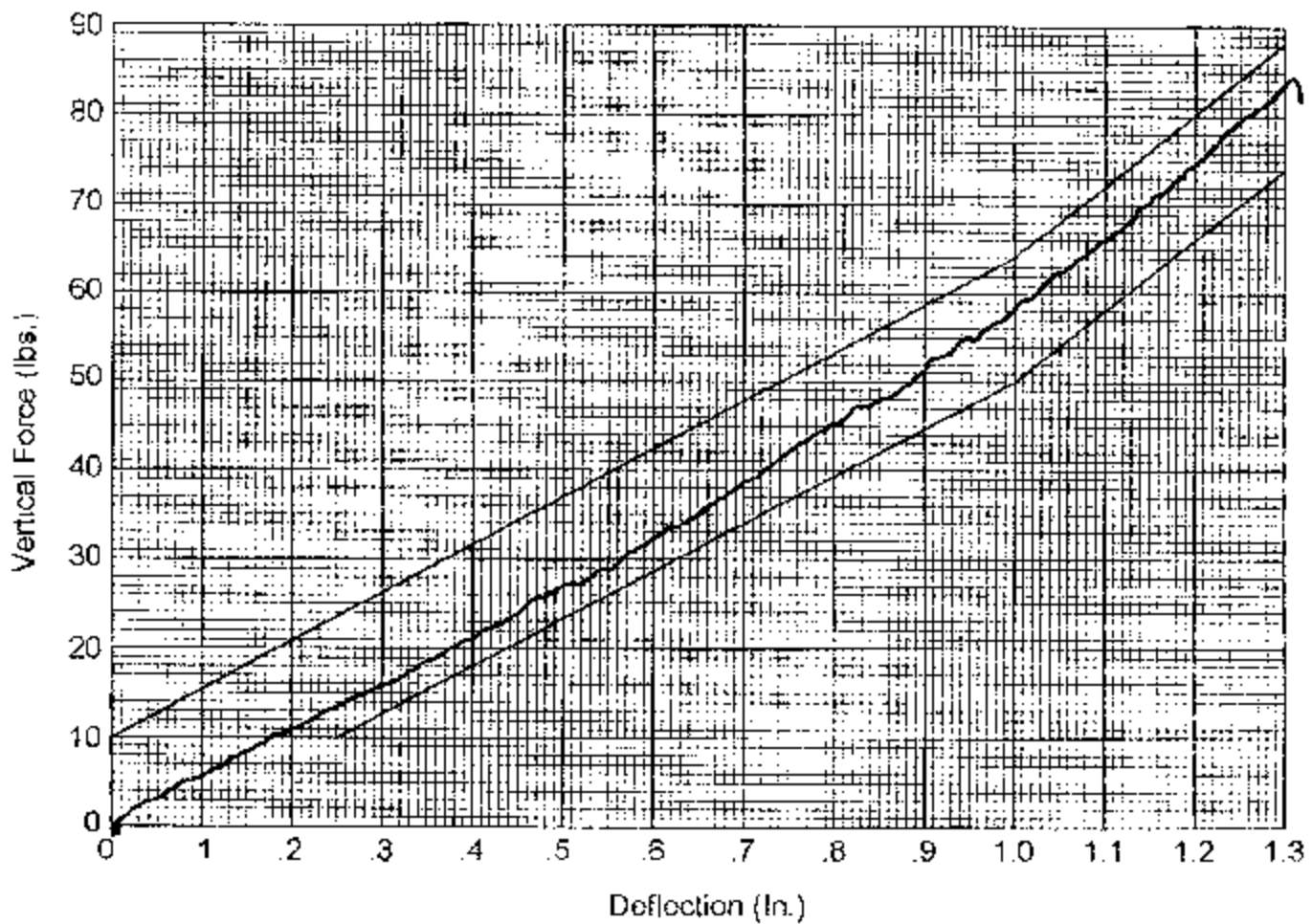
W/A

Date 5-02-03

Performed By BS

Temp. 70

Humidity 37%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number:

2

Date: May 2, 2003

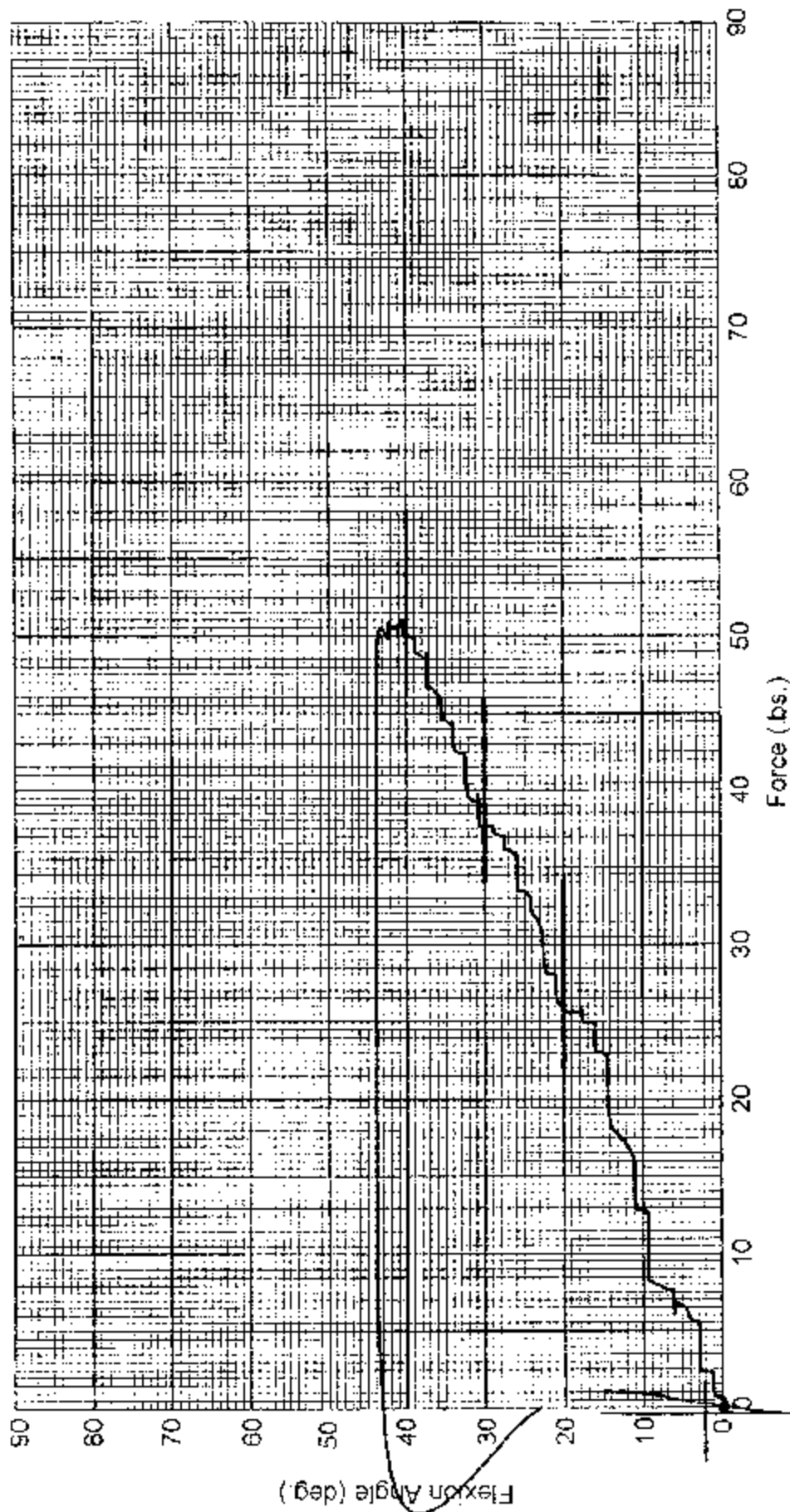
Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	114.3
FORCE @ 30° (N)	151.2 - 204.6	167.5
FORCE @ 40° (N)	204.6 - 258	222.4
RETURN ANGLE	12° max.	2°

REMARKS: None

Dummy S/N 015
 WIA -
 Date 5-02-83
 Performed By [Signature]
 Temp. 70°
 Humidity 37%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 2
 Date: May 2, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

SID H3 NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 2
Date: May 2, 2003 Laboratory Technician: B. Swicicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 2
Date: May 2, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

2

Date: April 25, 2003

Laboratory Technician:

B. Swiecicki

DAMPER IDENTIFICATION:

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	40.0
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	934.7
	DISPLACEMENT (mm)	30 - 35	31.7
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1867.3
	DISPLACEMENT (mm)	32 - 37	34.9
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4438.7
	DISPLACEMENT (mm)	33 - 40	37.6

DAMPER SETTING: 5

REMARKS: None

Shock Low at 3.05 m/s

Low Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 016

Work File: 016SL1 04-25-03

TEST RESULTS

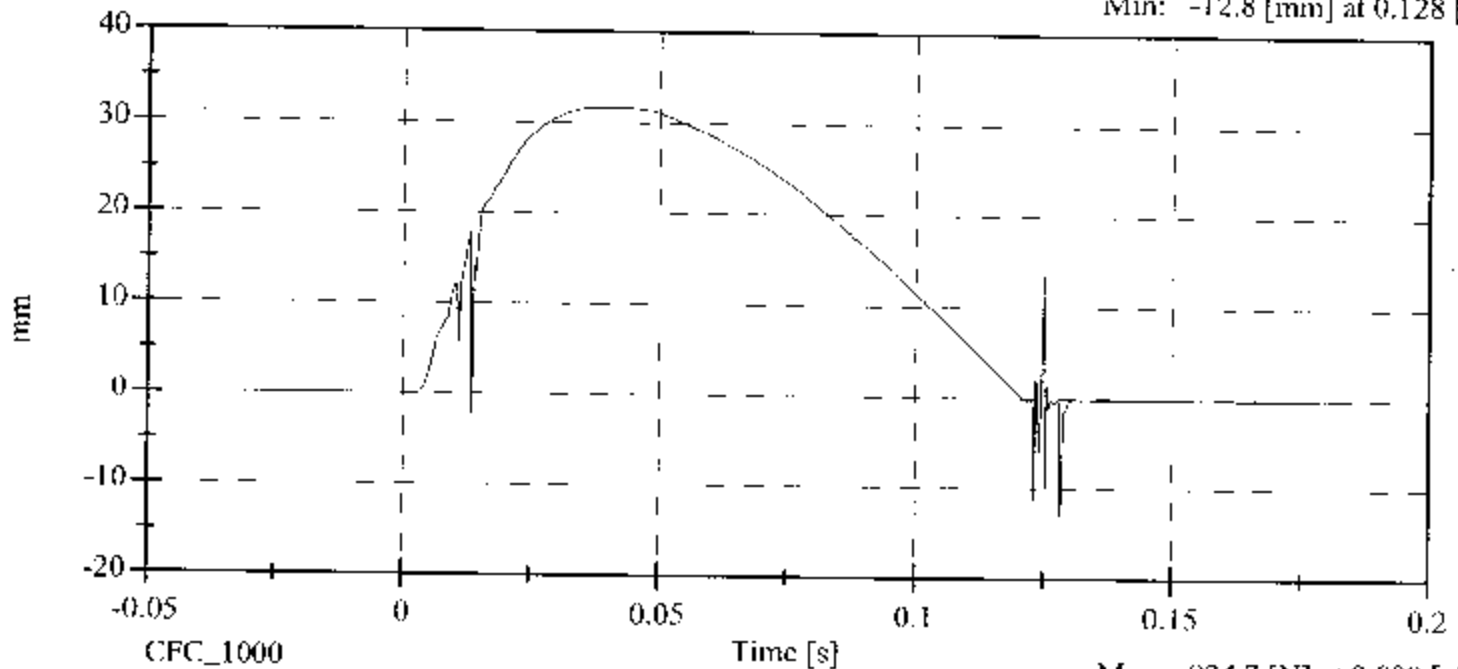
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	30.00-35.00 mm	31.65 mm	Passed
Maximum Force:	836.00-1125.00 N	934.69 N	Passed

Shock Low

Displacement vs. Time

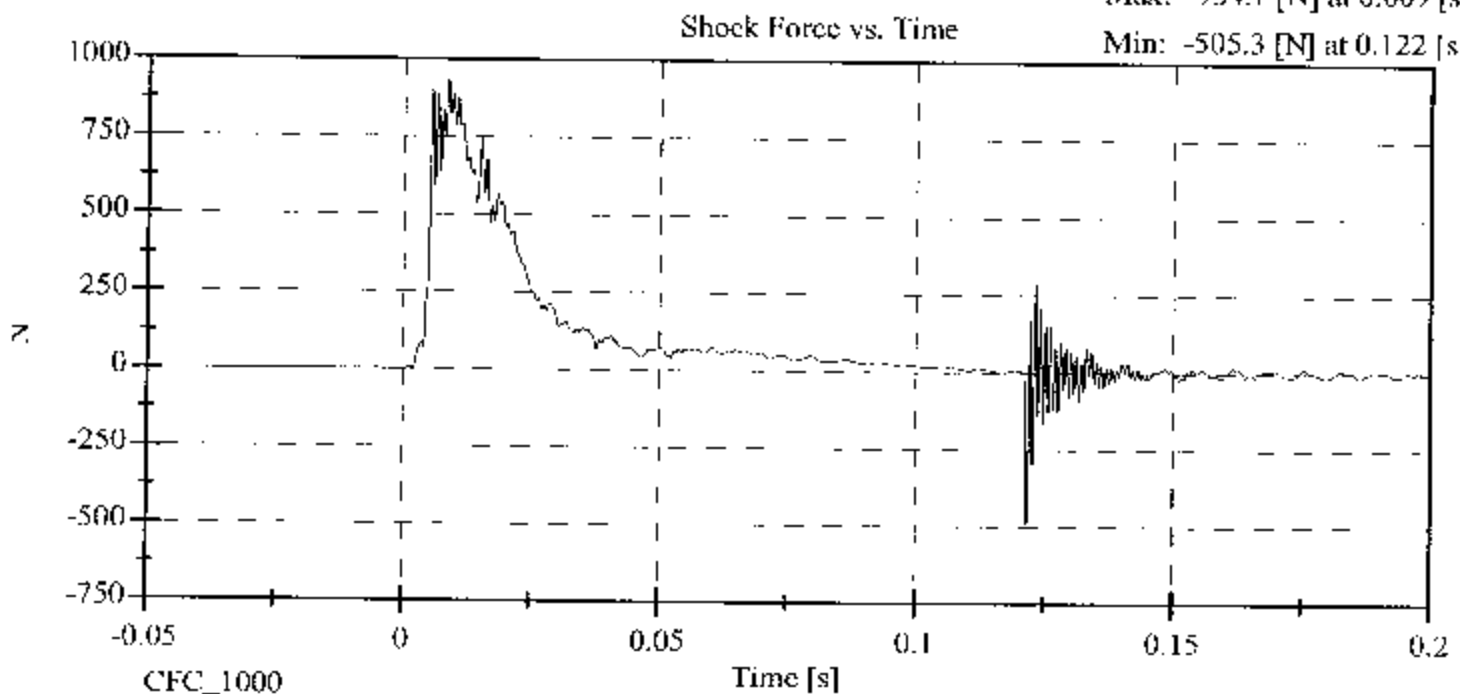
Max: 31.6 [mm] at 0.037 [s]

Min: -12.8 [mm] at 0.128 [s]



Max: 934.7 [N] at 0.009 [s]

Min: -505.3 [N] at 0.122 [s]



Shock Med at 4.27 m/s

Medium Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 016

Work File: 016SM 04-25-03

TEST RESULTS

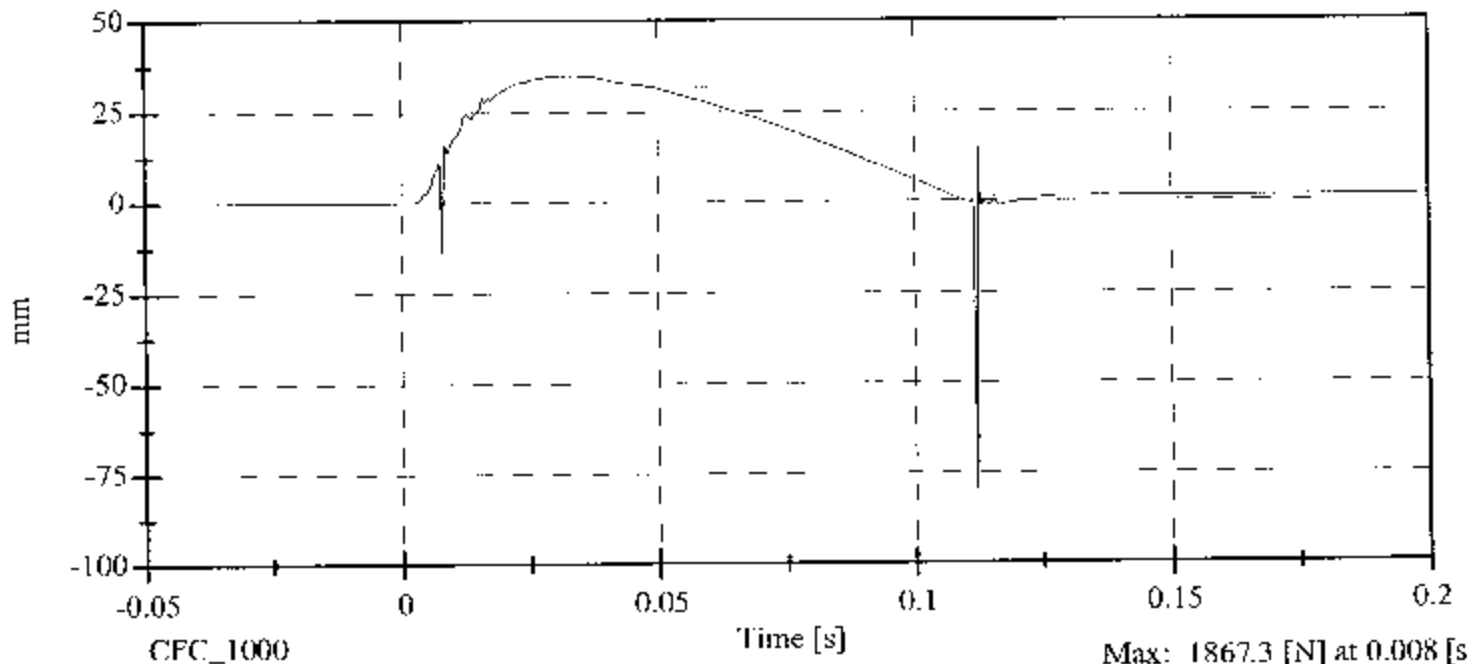
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	32.00-37.00 mm	34.91 mm	Passed
Maximum Force:	1730.00-2099.00 N	1867.29 N	Passed

Shock Med

Displacement vs. Time

Max: 34.9 [mm] at 0.033 [s]

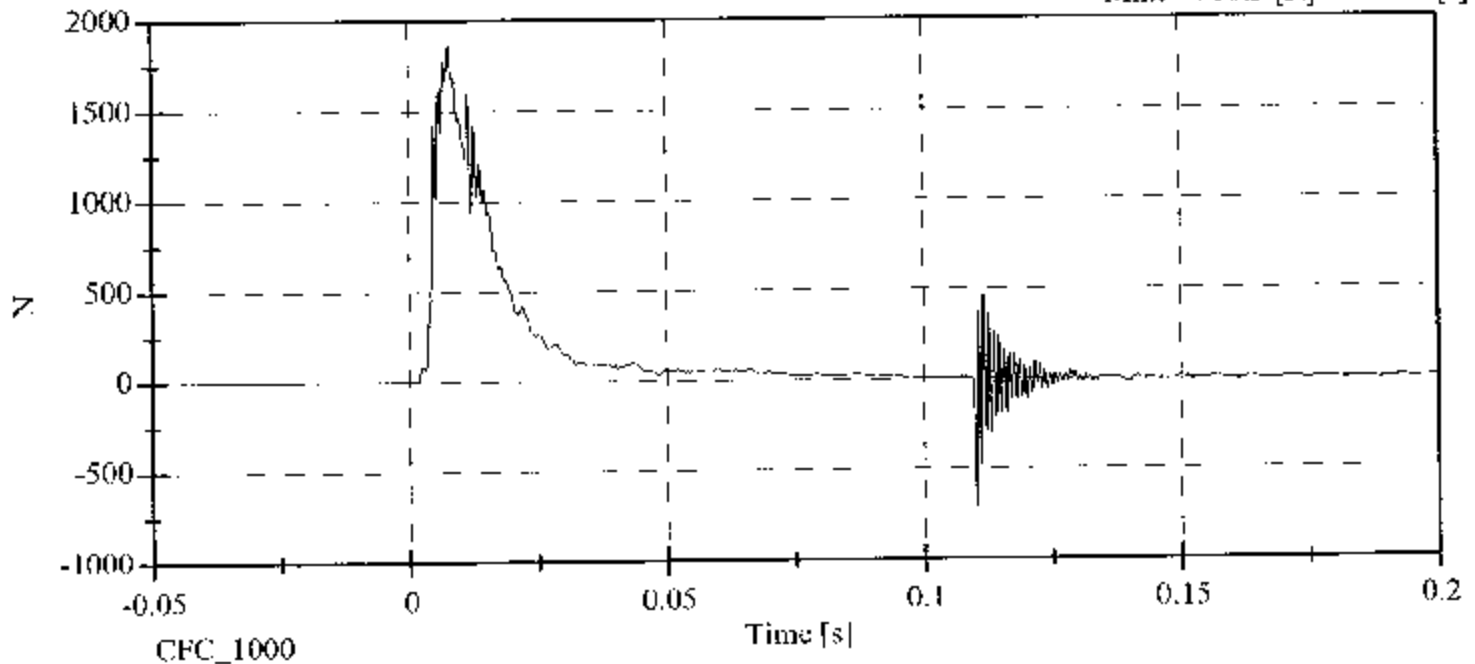
Min: -79.4 [mm] at 0.112 [s]



Shock Force vs. Time

Max: 1867.3 [N] at 0.008 [s]

Min: -710.5 [N] at 0.110 [s]



Shock High at 6.10 m/s

High Part 572F Shock Absorber Impact

Calibration Date: 04-25-03

Serial No: 016

Work File: 016SH2 04-25-03

TEST RESULTS

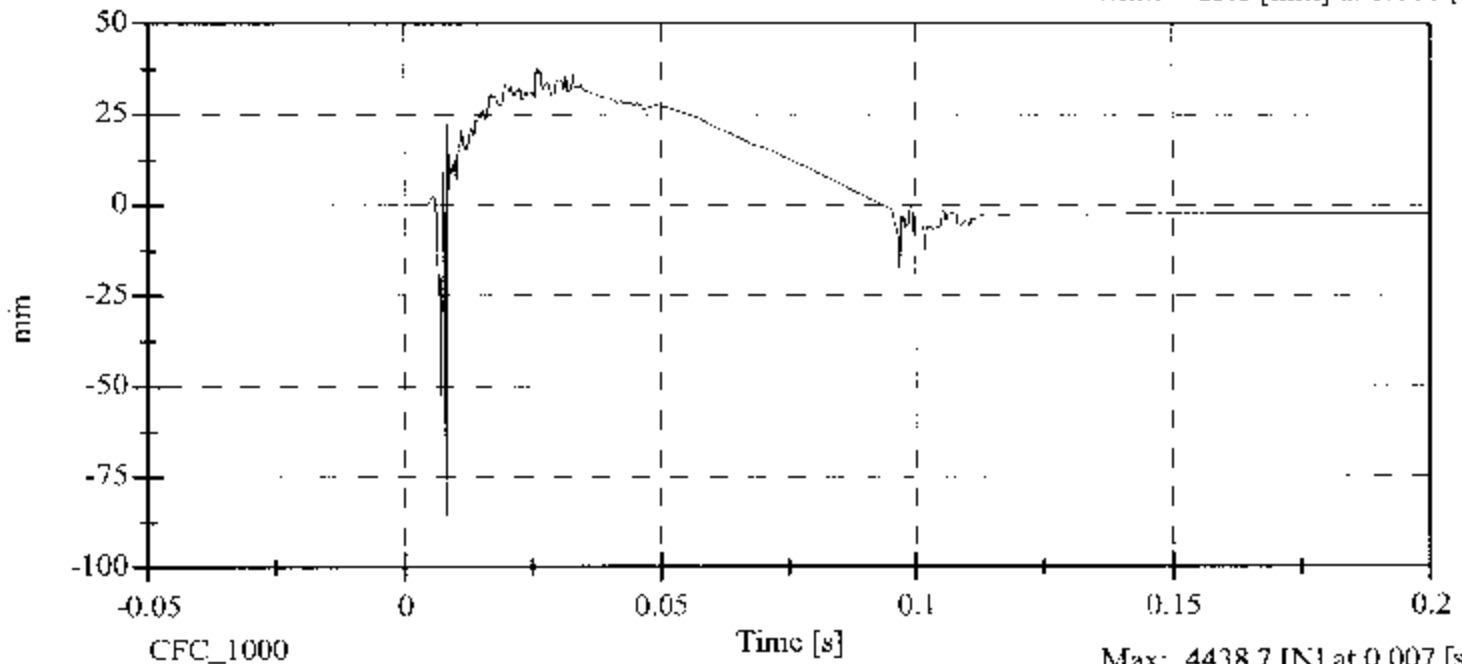
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	40.00 %	Passed
Displacement:	33.00-40.00 mm	37.56 mm	Passed
Maximum Force:	3741.00-4448.00 N	4438.69 N	Passed

Shock High

Displacement vs. Time

Max: 37.6 [mm] at 0.026 [s]

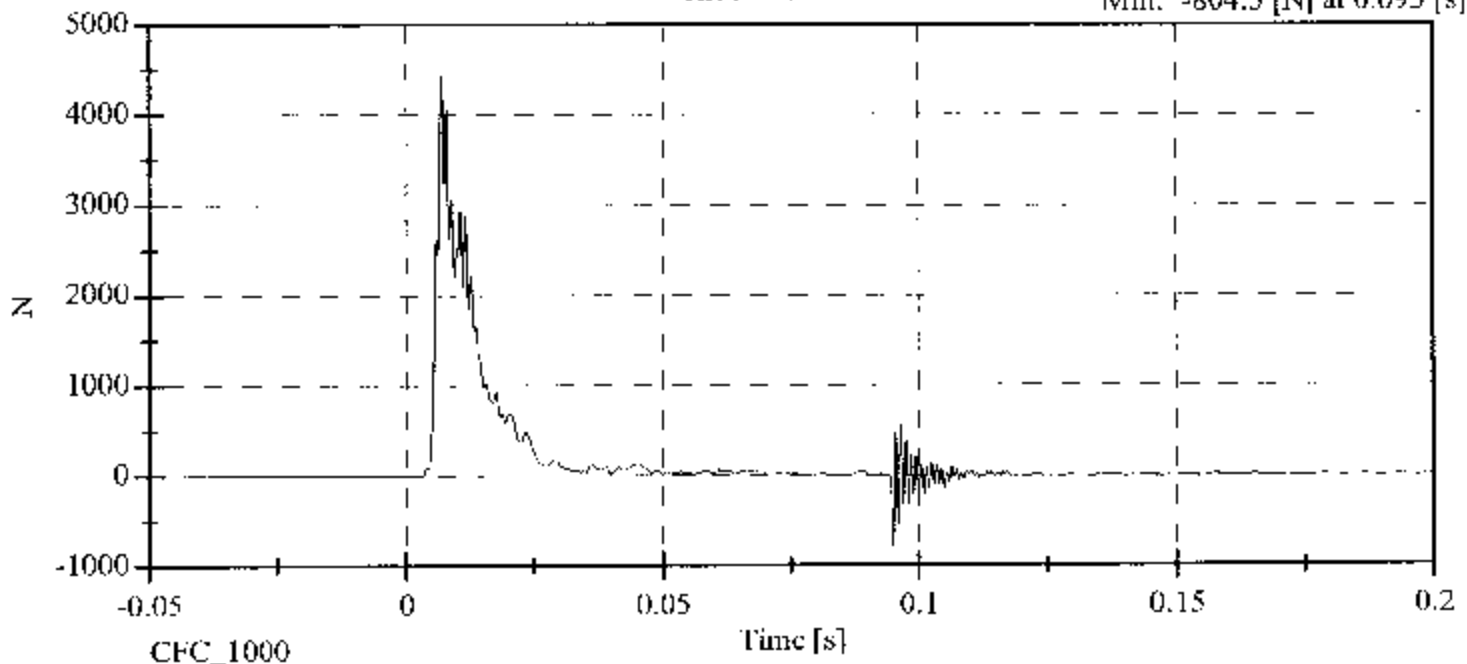
Min: -85.8 [mm] at 0.008 [s]



Shock Force vs. Time

Max: 4438.7 [N] at 0.007 [s]

Min: -804.5 [N] at 0.095 [s]



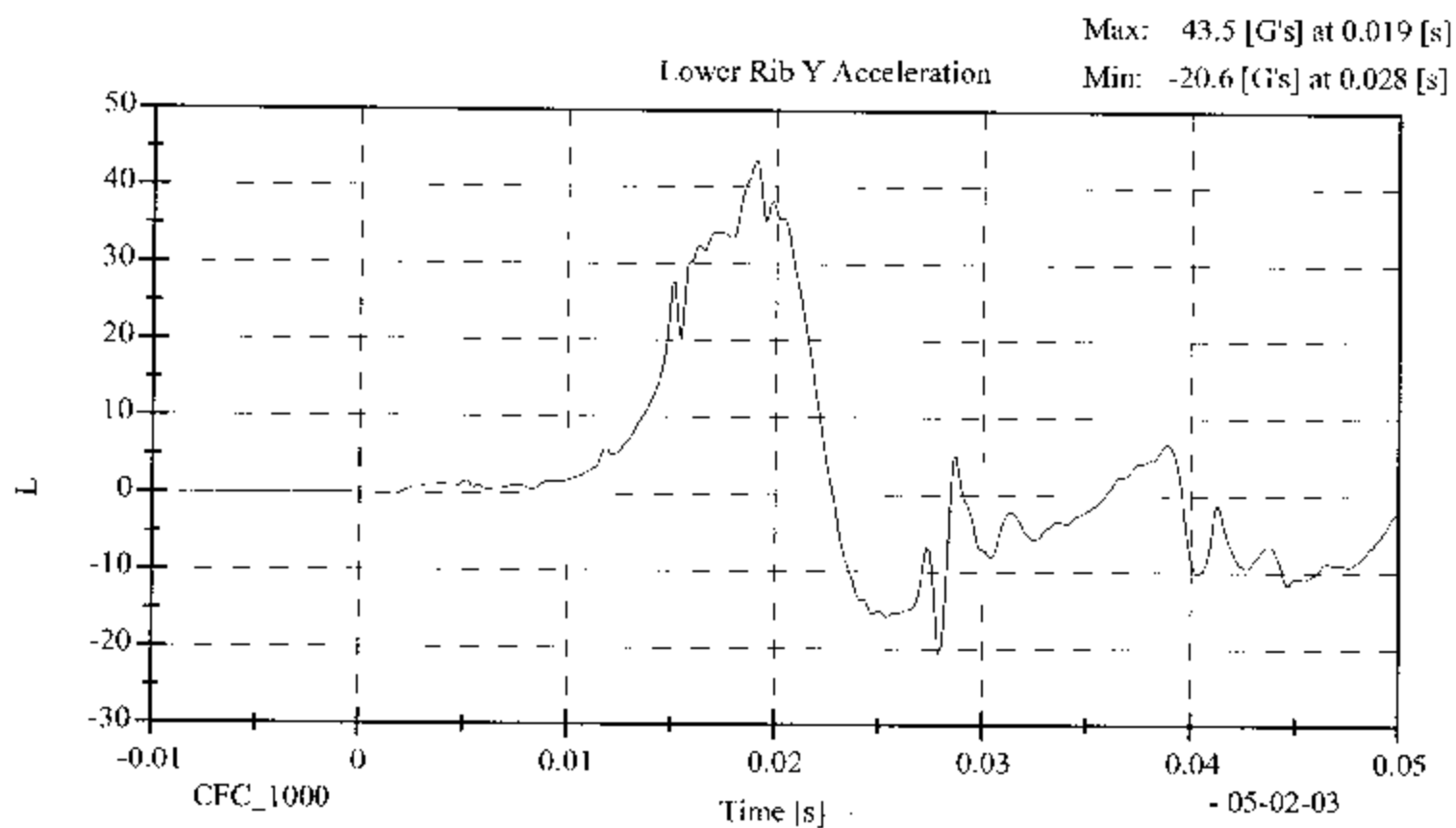
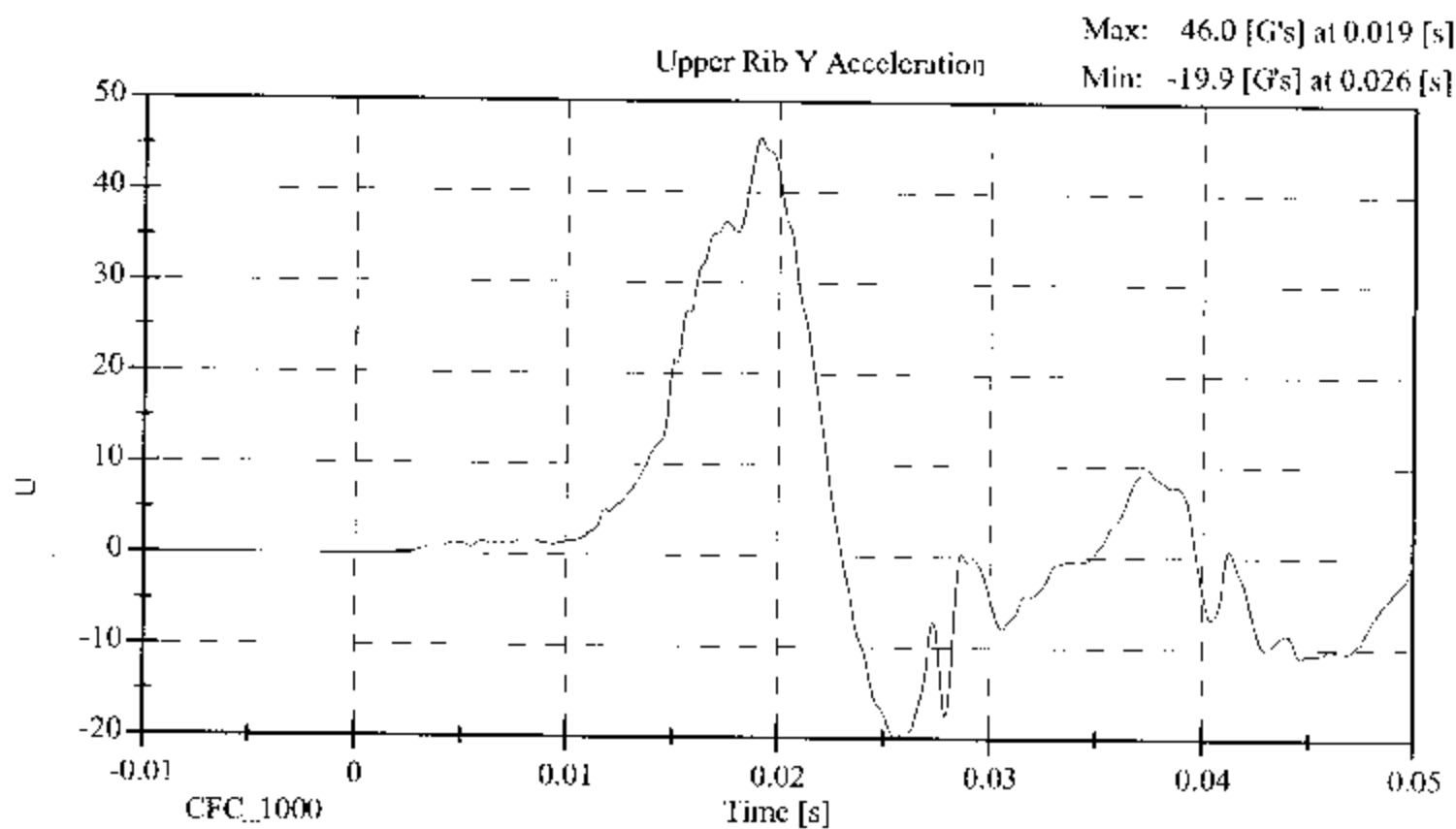
**LATERAL THORAX IMPACT TEST
PRE-TEST**

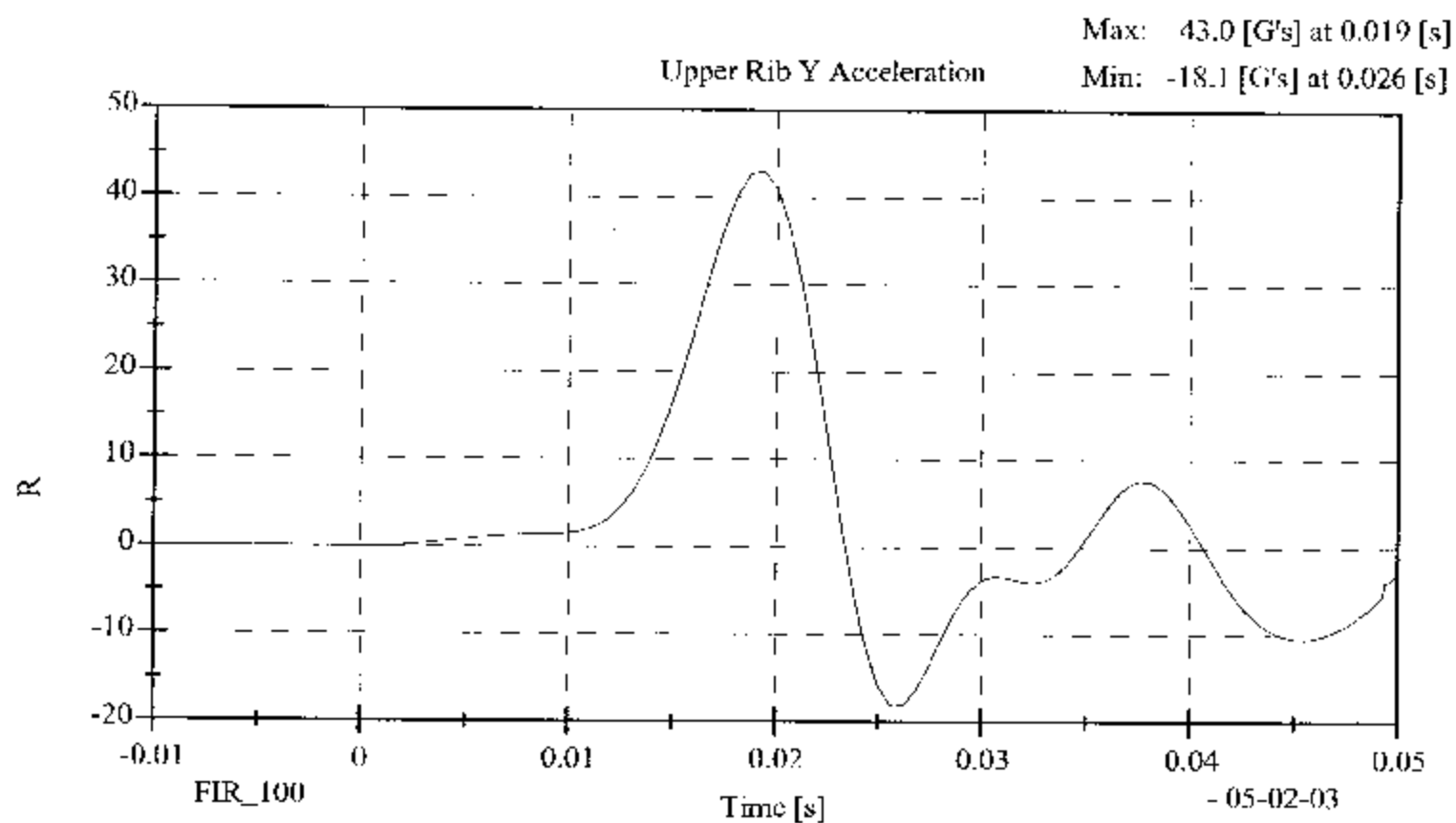
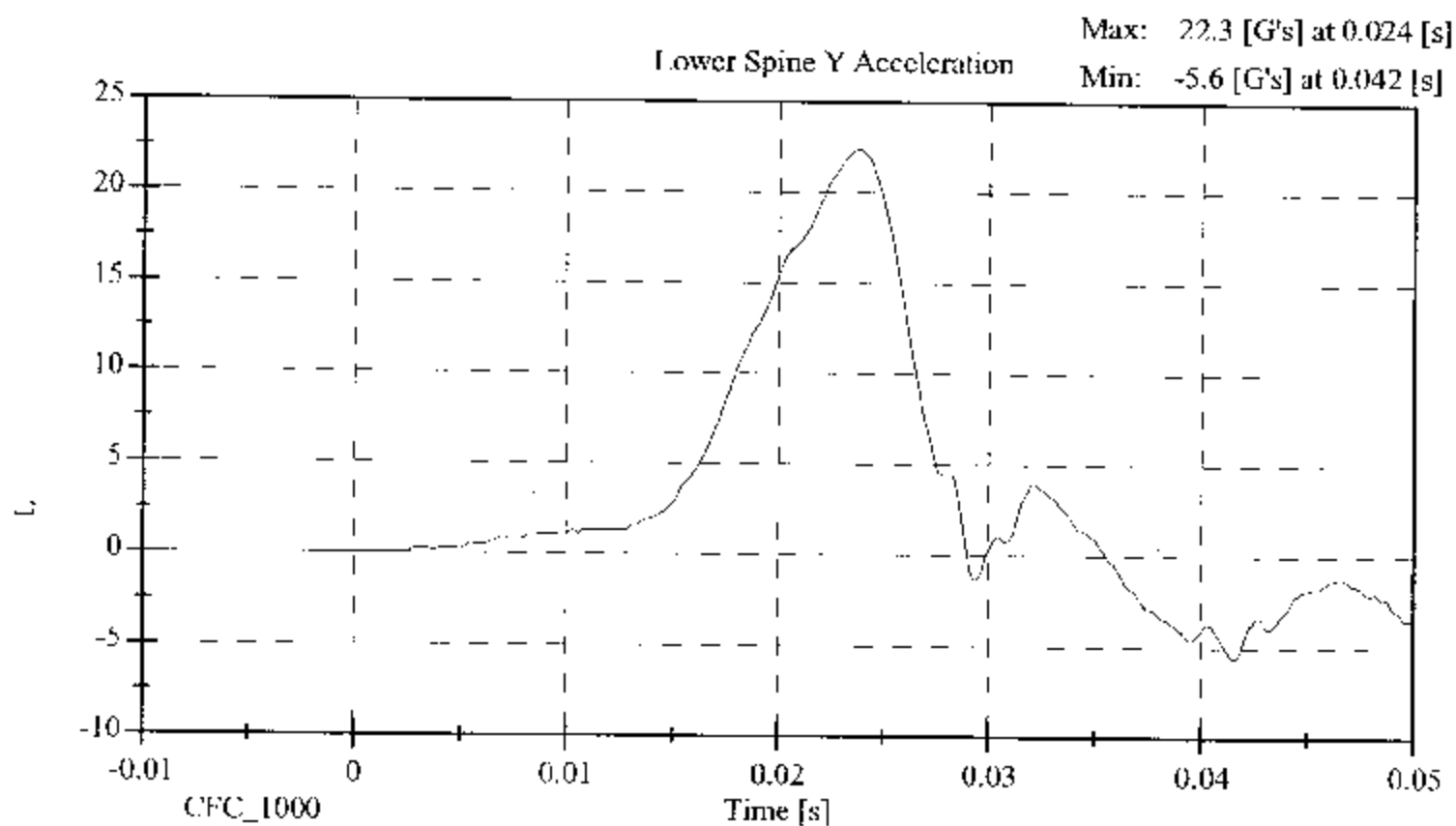
CONFIGURED FOR LEFT SIDE IMPACT

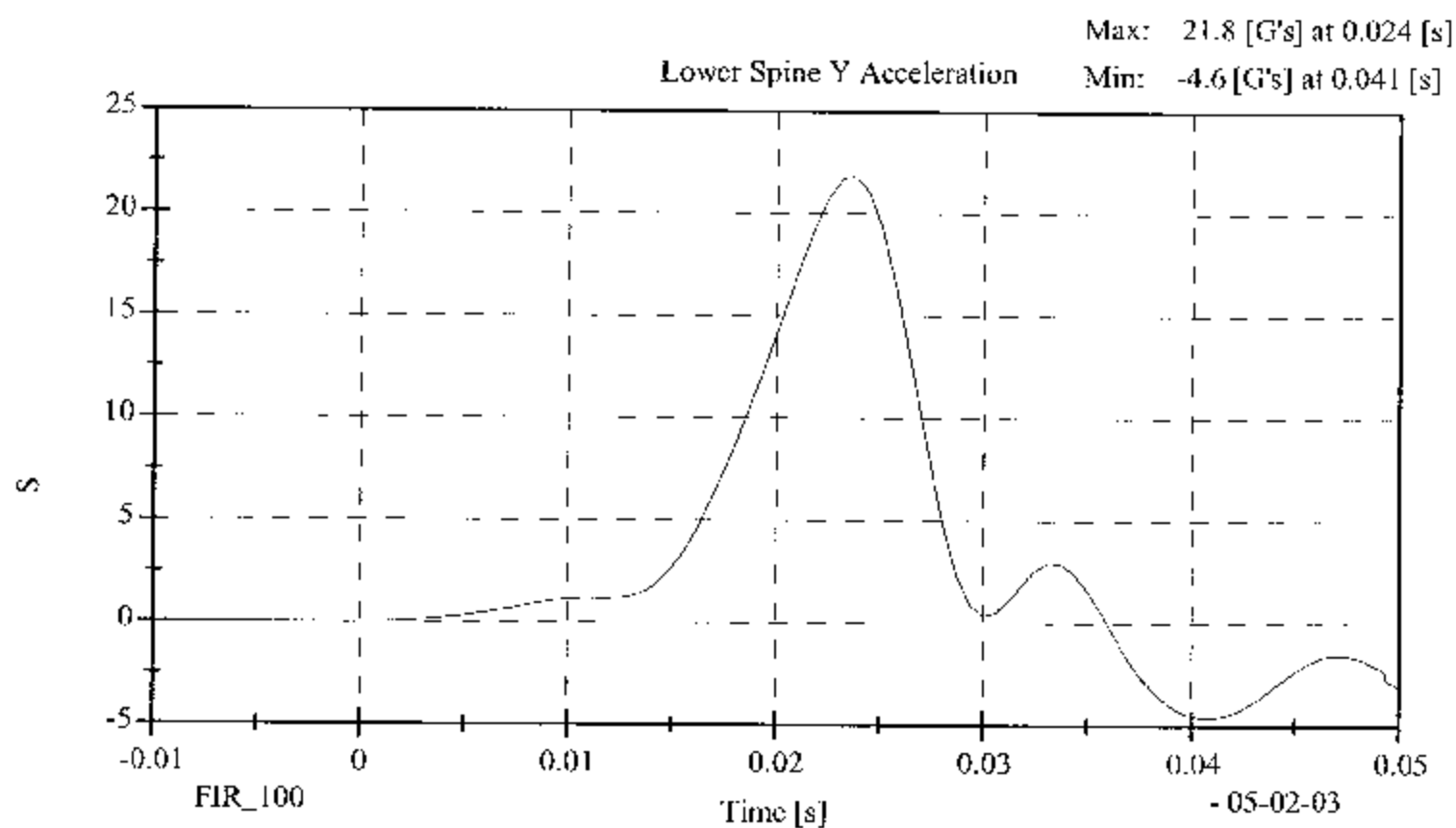
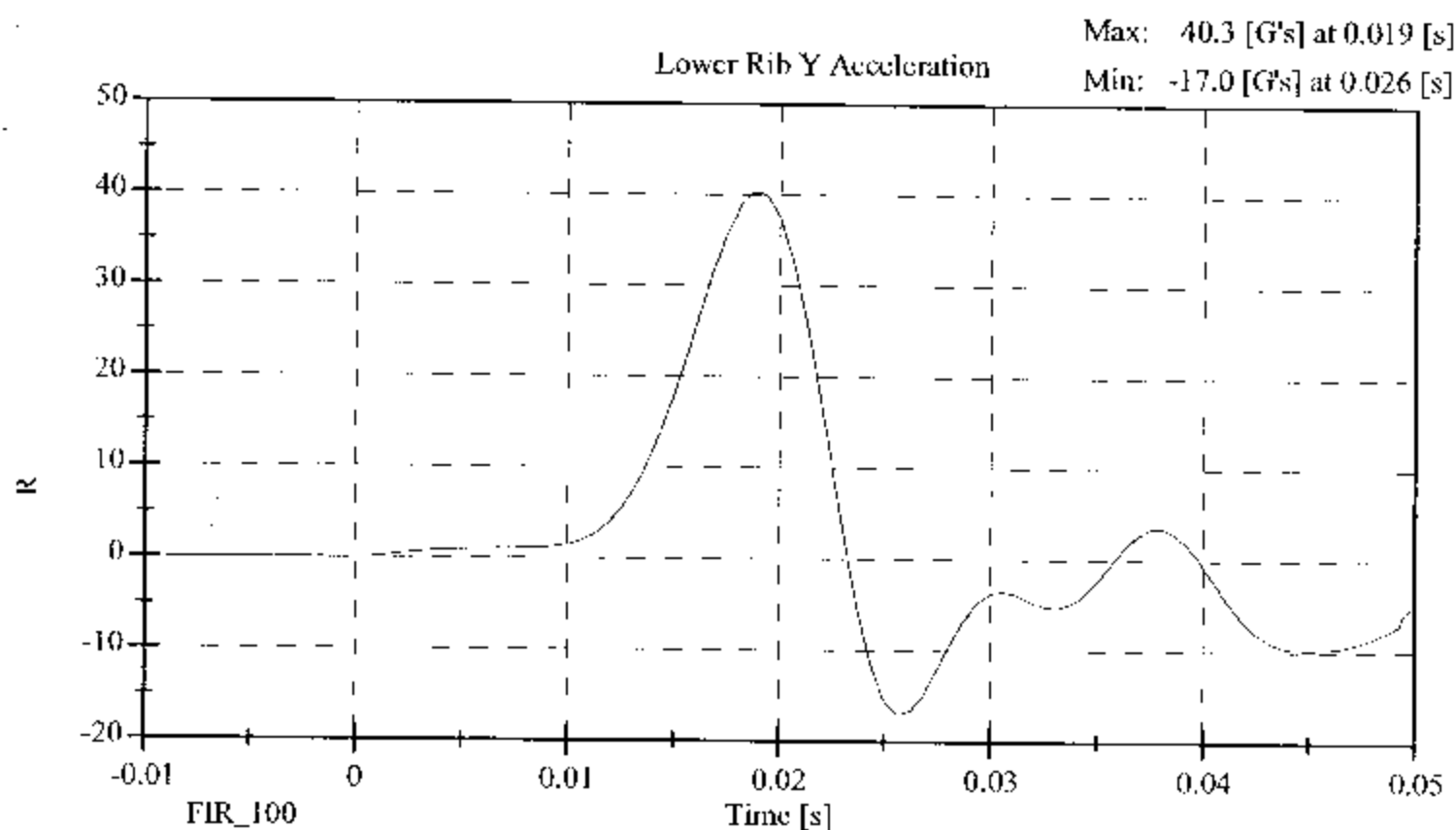
SID H3 Serial No.: 016 Sequential Test Number: 2
Date: May 2, 2003 Laboratory Technician: B. Swicicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.29
UPPER RIB (g's)	37 - 46	42.97
LOWER RIB (g's)	37 - 46	40.28
LOWER SPINE (g's)	15 - 22	21.81

REMARKS: None







**LATERAL PELVIS IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number:

2

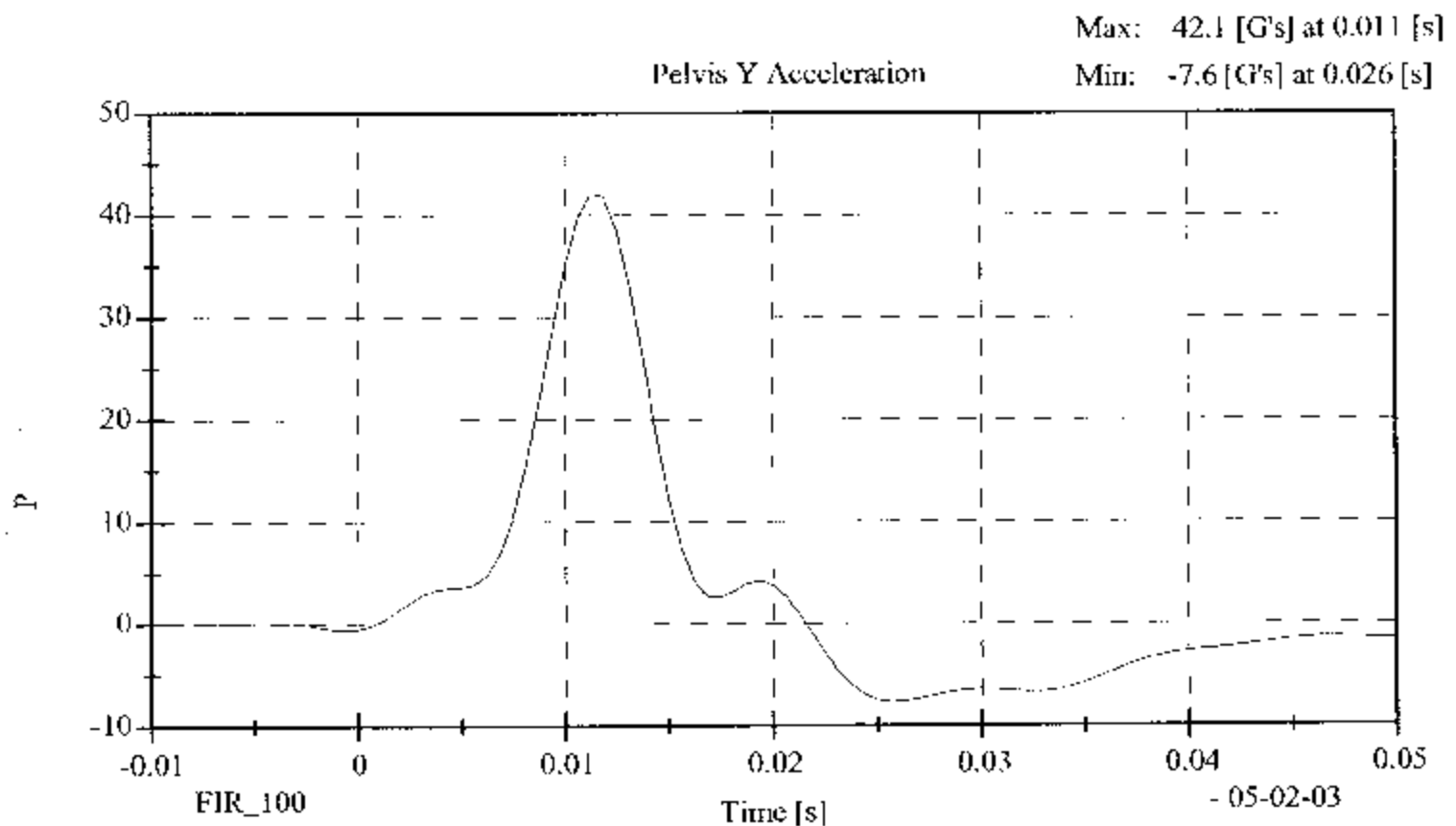
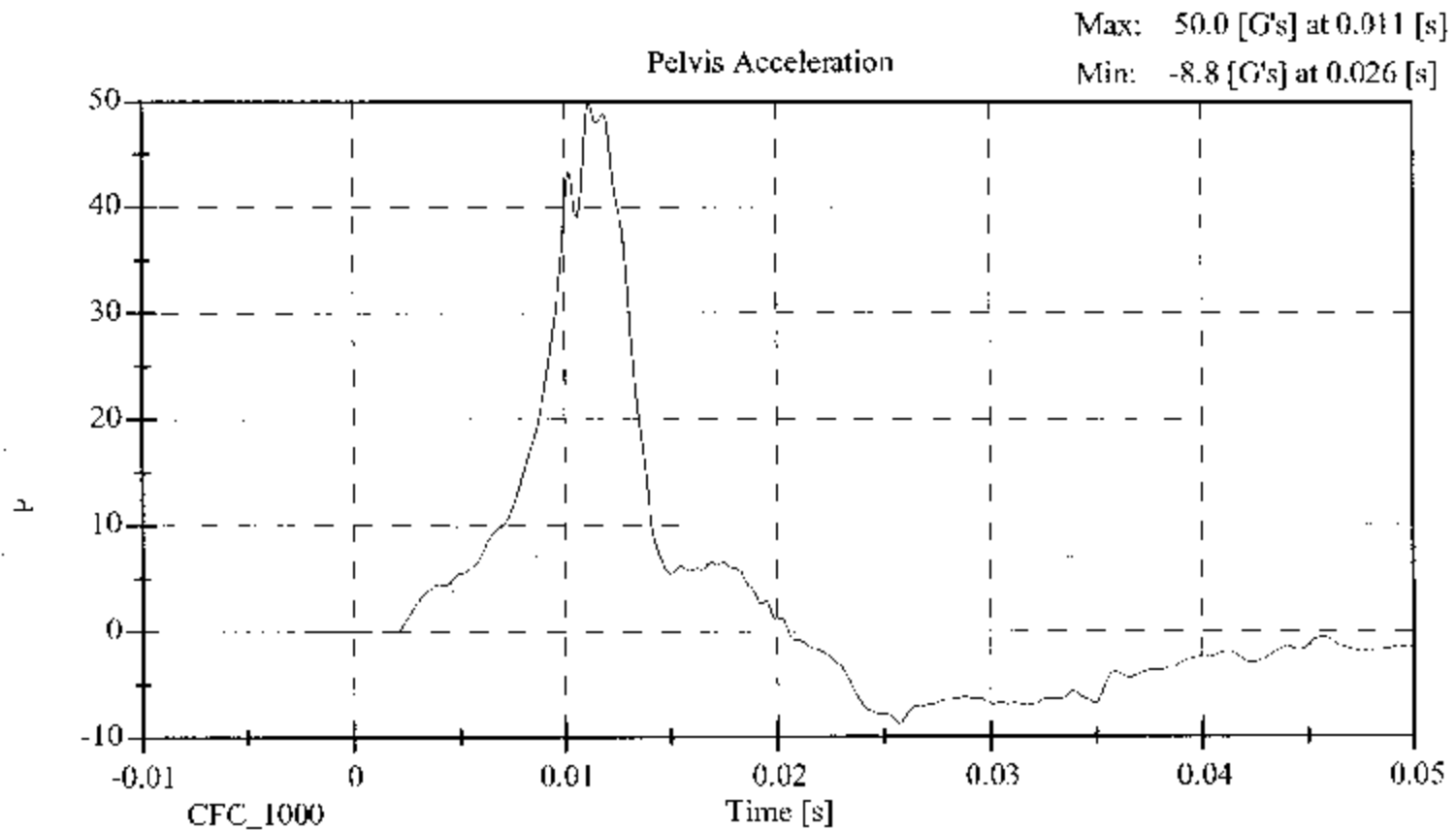
Date: May 2, 2003

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
PROBE SPEED (m/s)	4.27 - 4.33	4.27
PELVIS ACCELERATION (g's)	40 - 60	42.12

REMARKS: None



HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

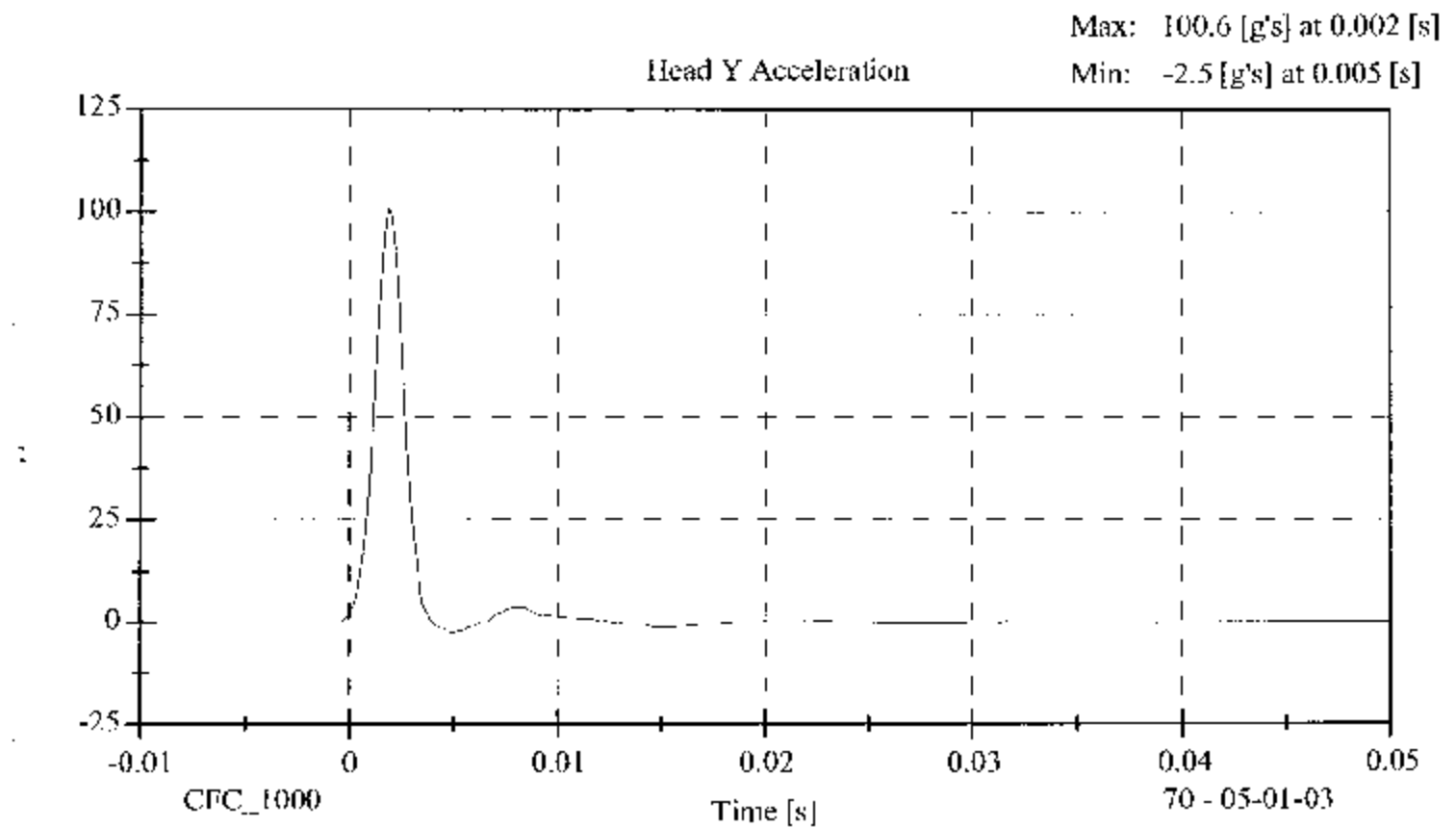
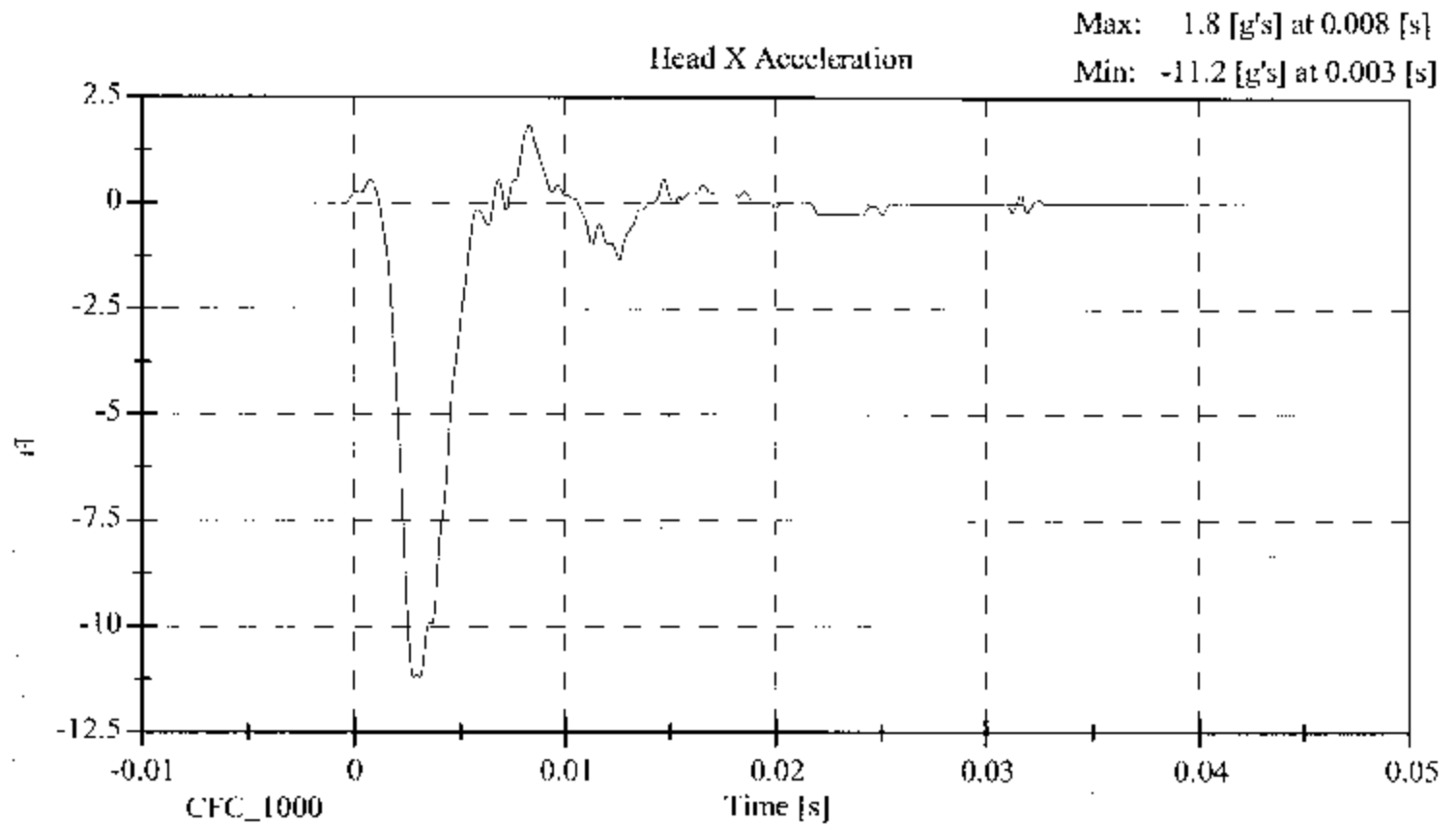
CONFIGURED FOR LEFT SIDE IMPACT

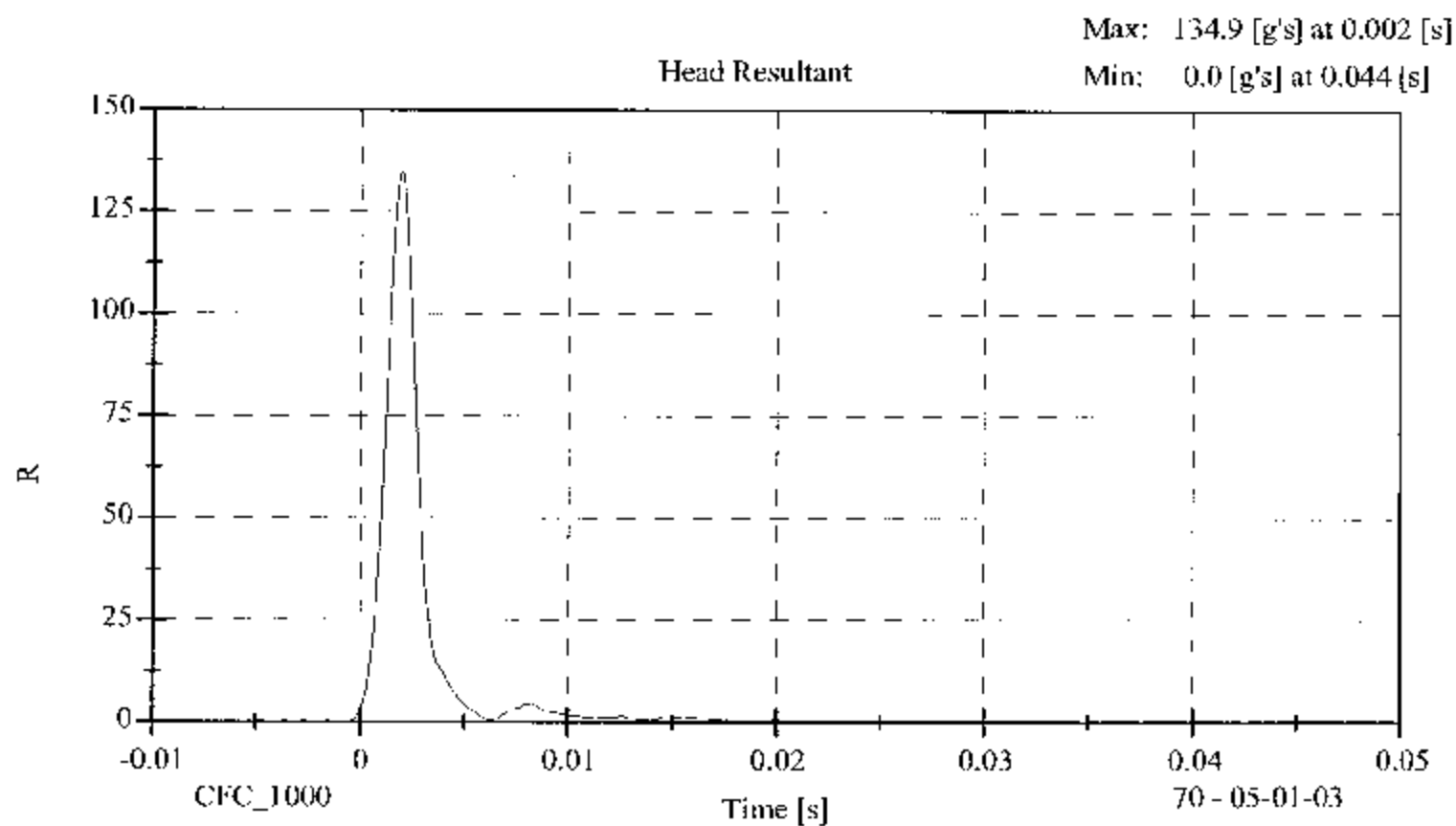
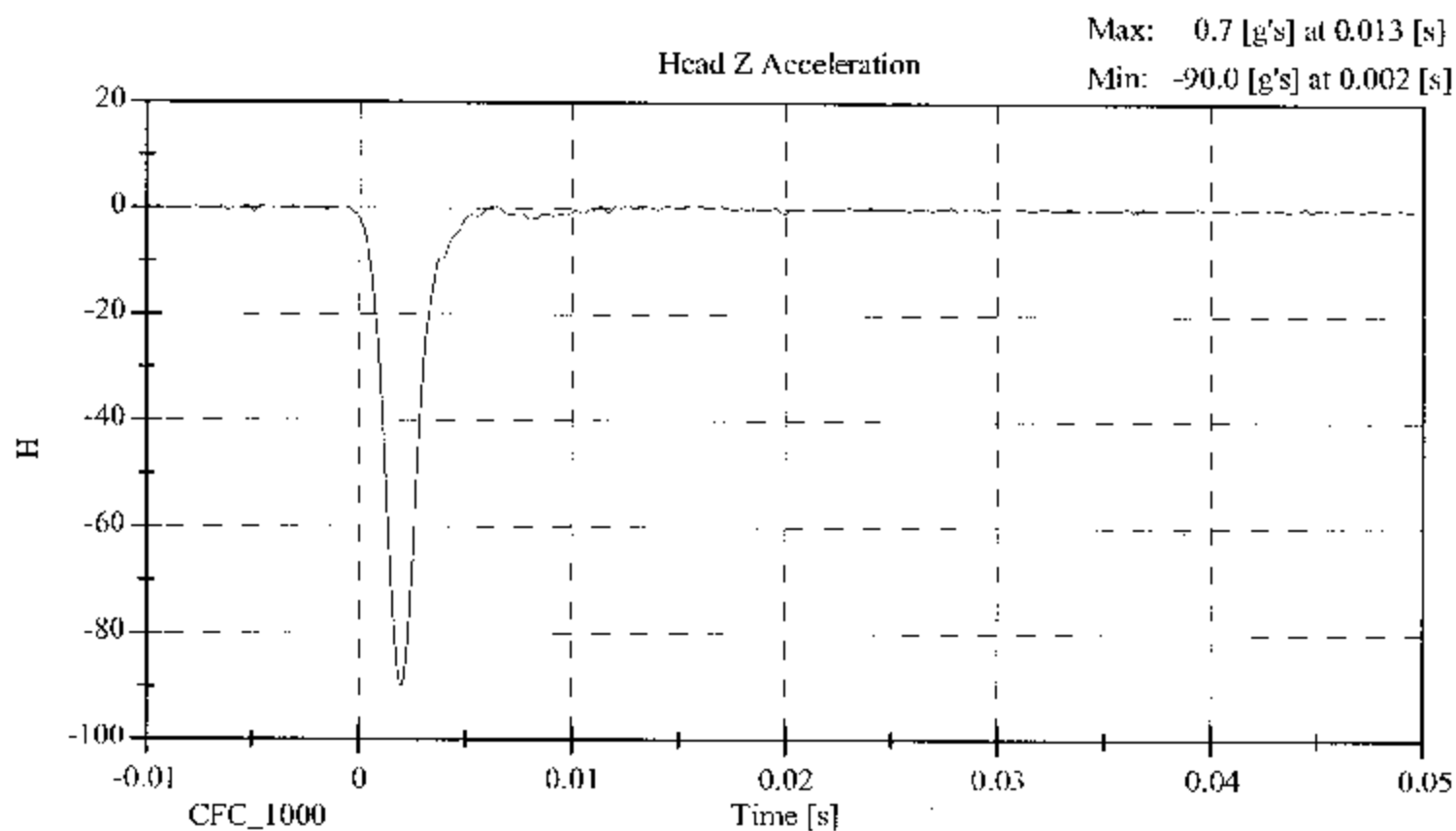
SID Serial No.: 016 Sequential Test Number: 2
Date: May 1, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 – 22.2	21.1
RELATIVE HUMIDITY (%)	10 – 70	41.0
PEAK RESULTANT ACCELERATION (Gs)	120 – 150	134.95
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	1.85
CURVE PERCENT NONMODAL (%)	< 15	3.36

REMARKS: None

016 Head Drop





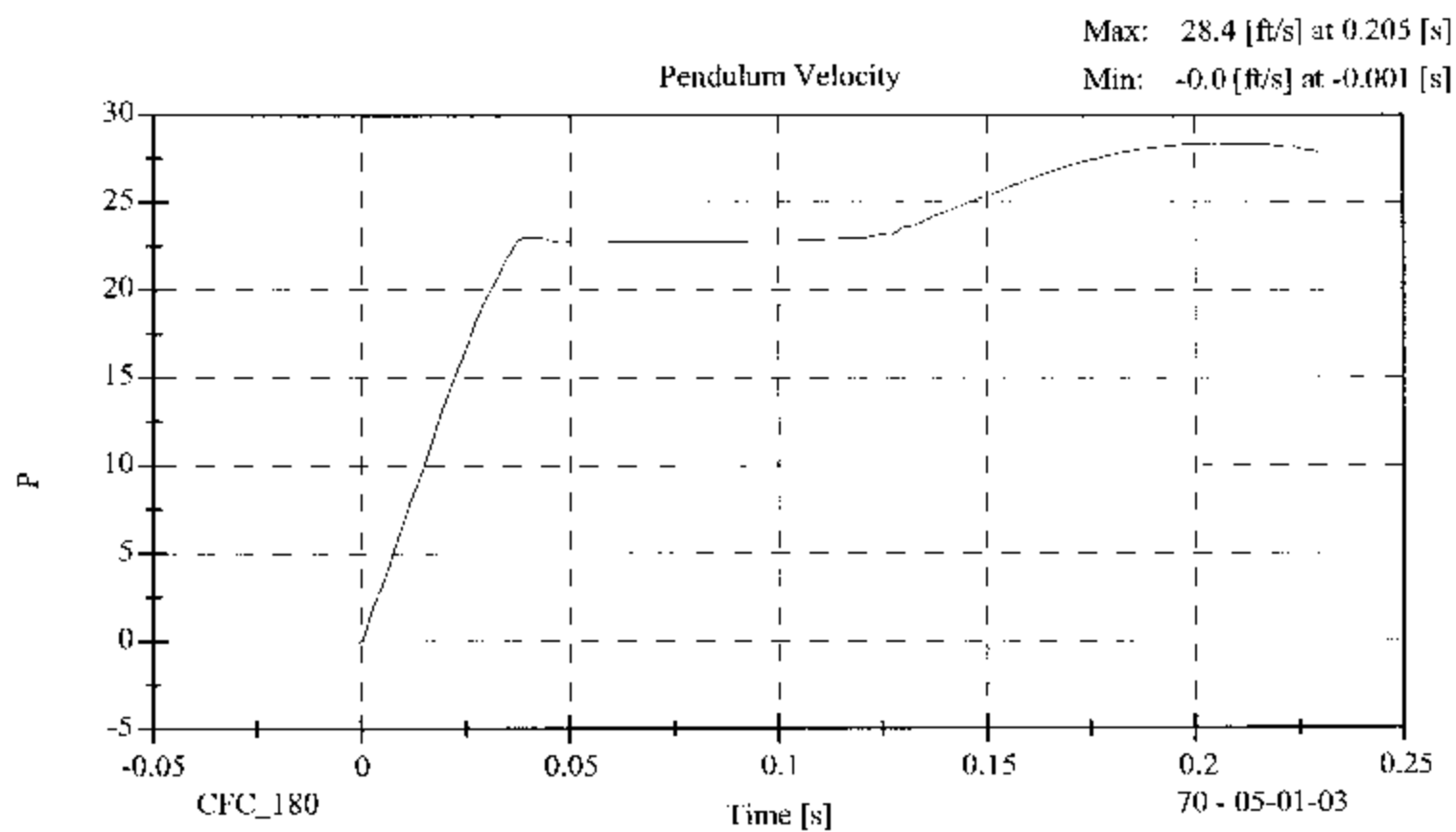
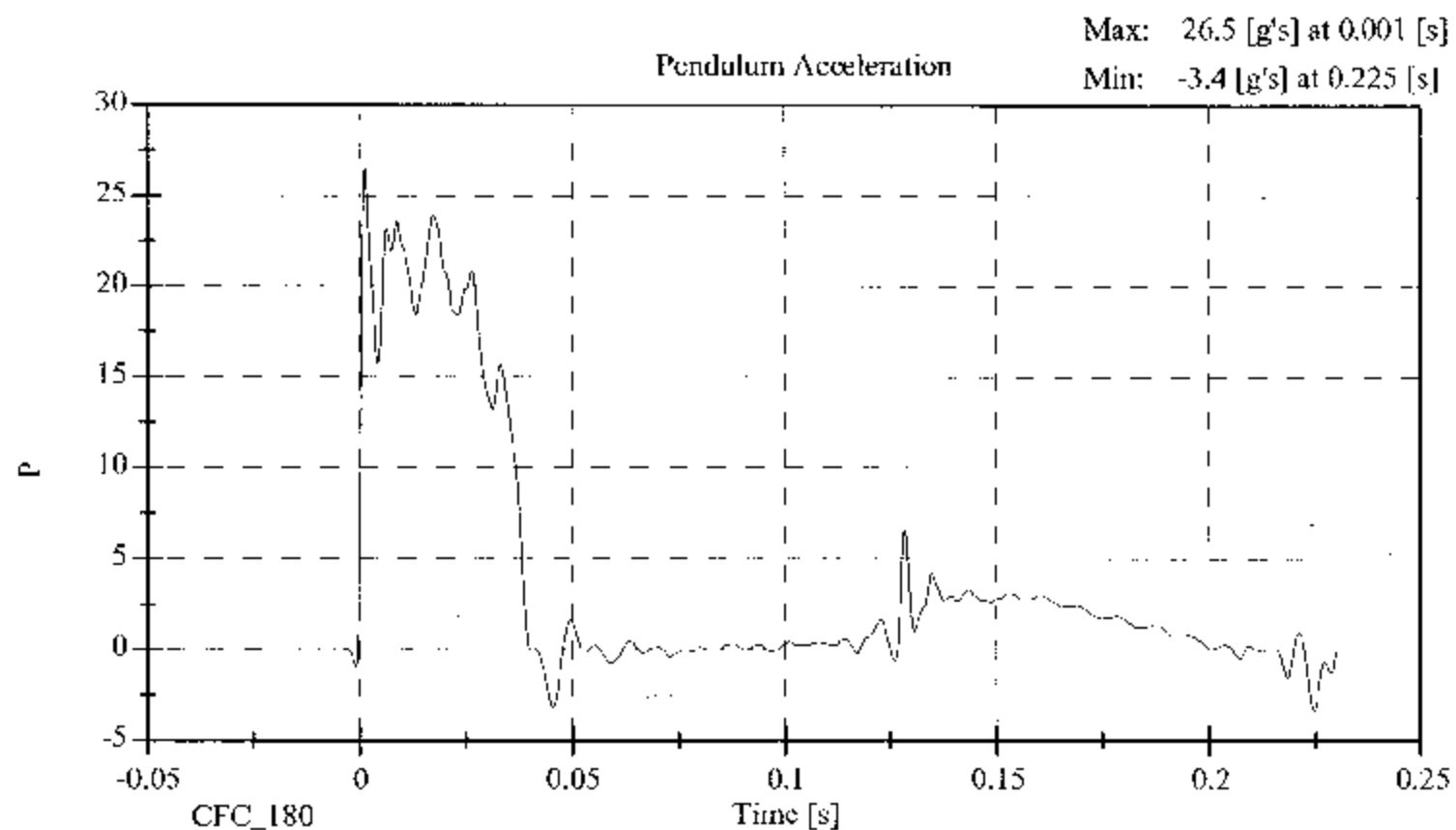
LATERAL NECK BENDING TEST
PRE-TEST
 (Test not required for SID certification)

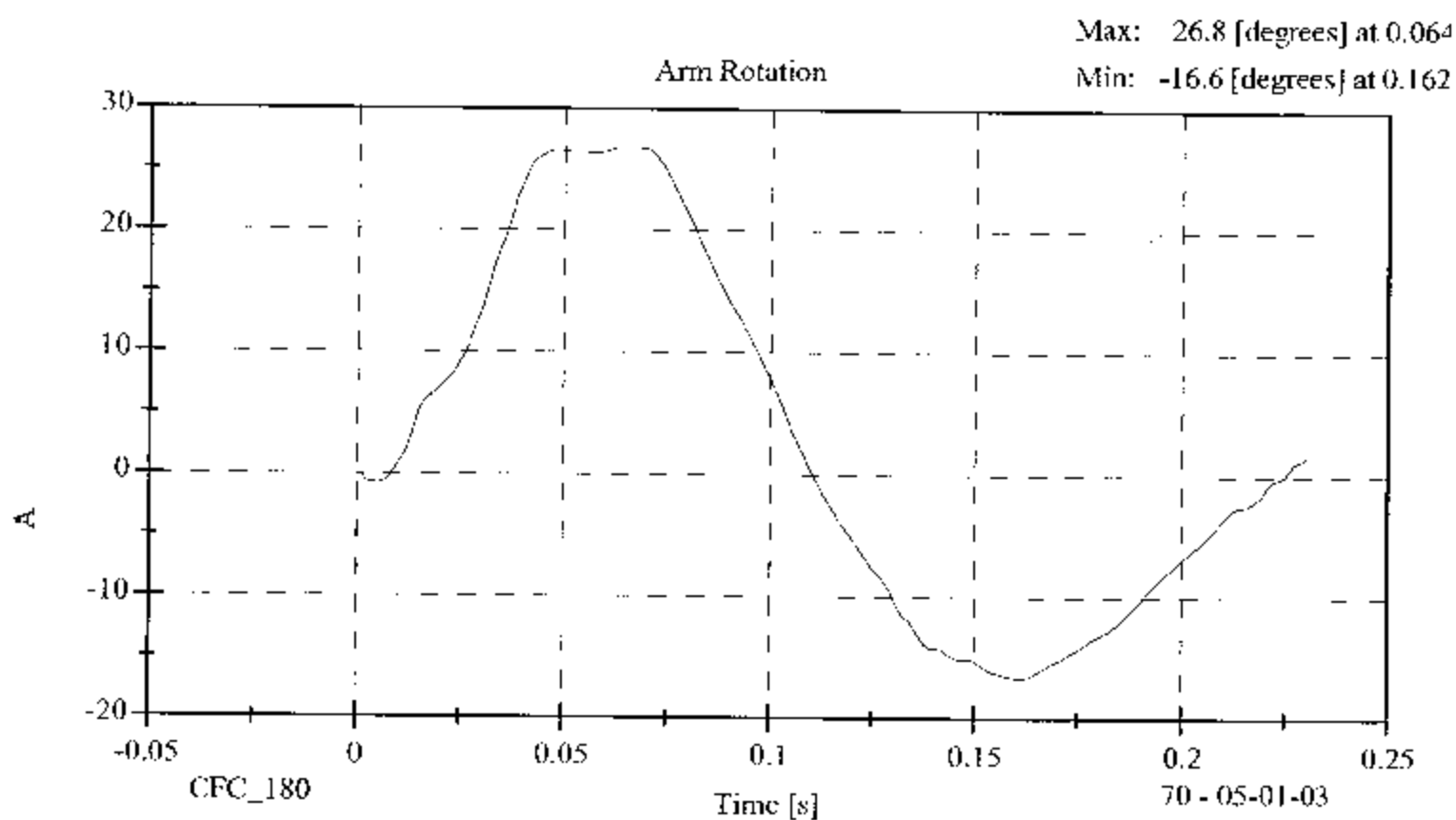
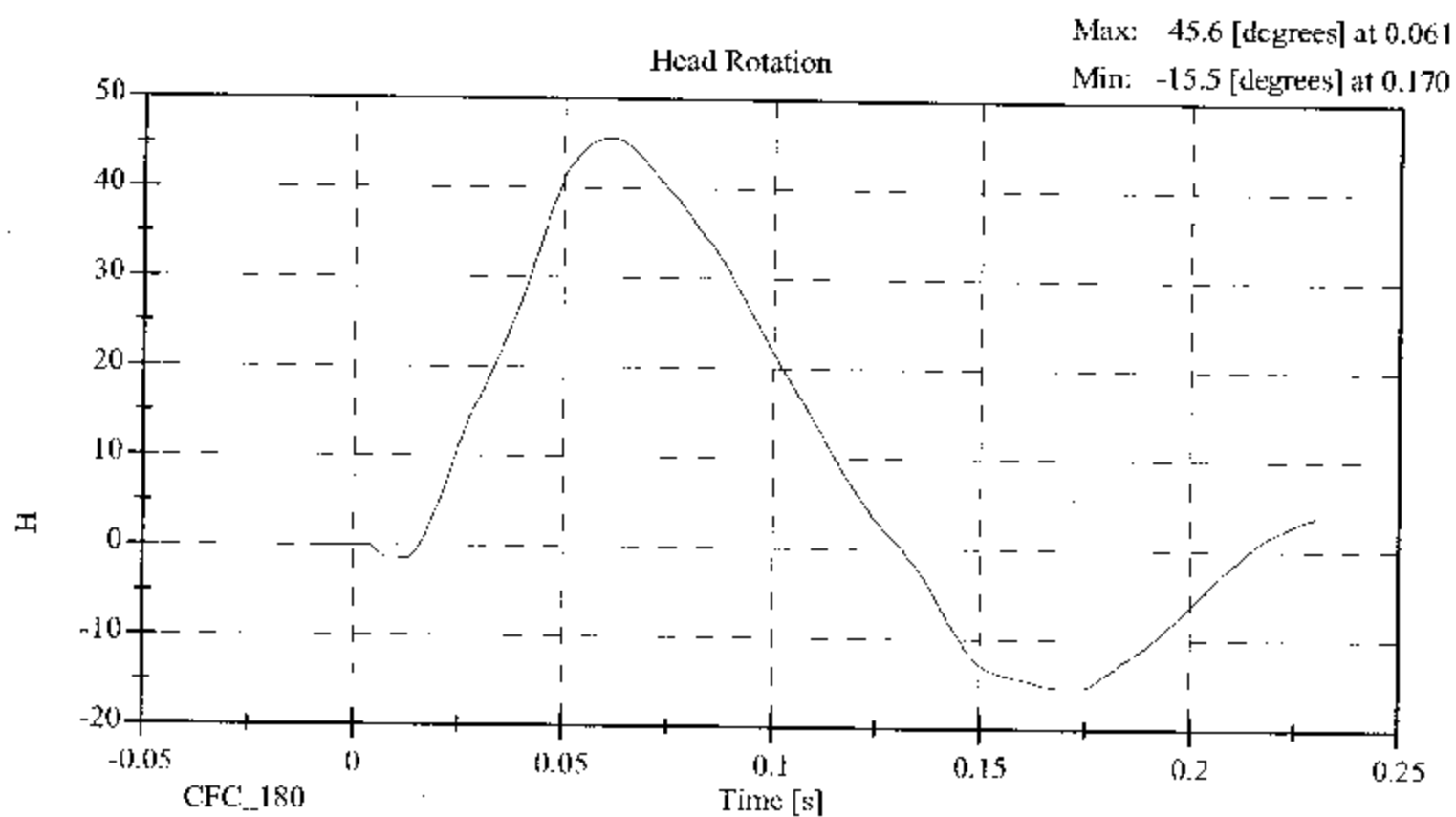
CONFIGURED FOR LEFT SIDE IMPACT

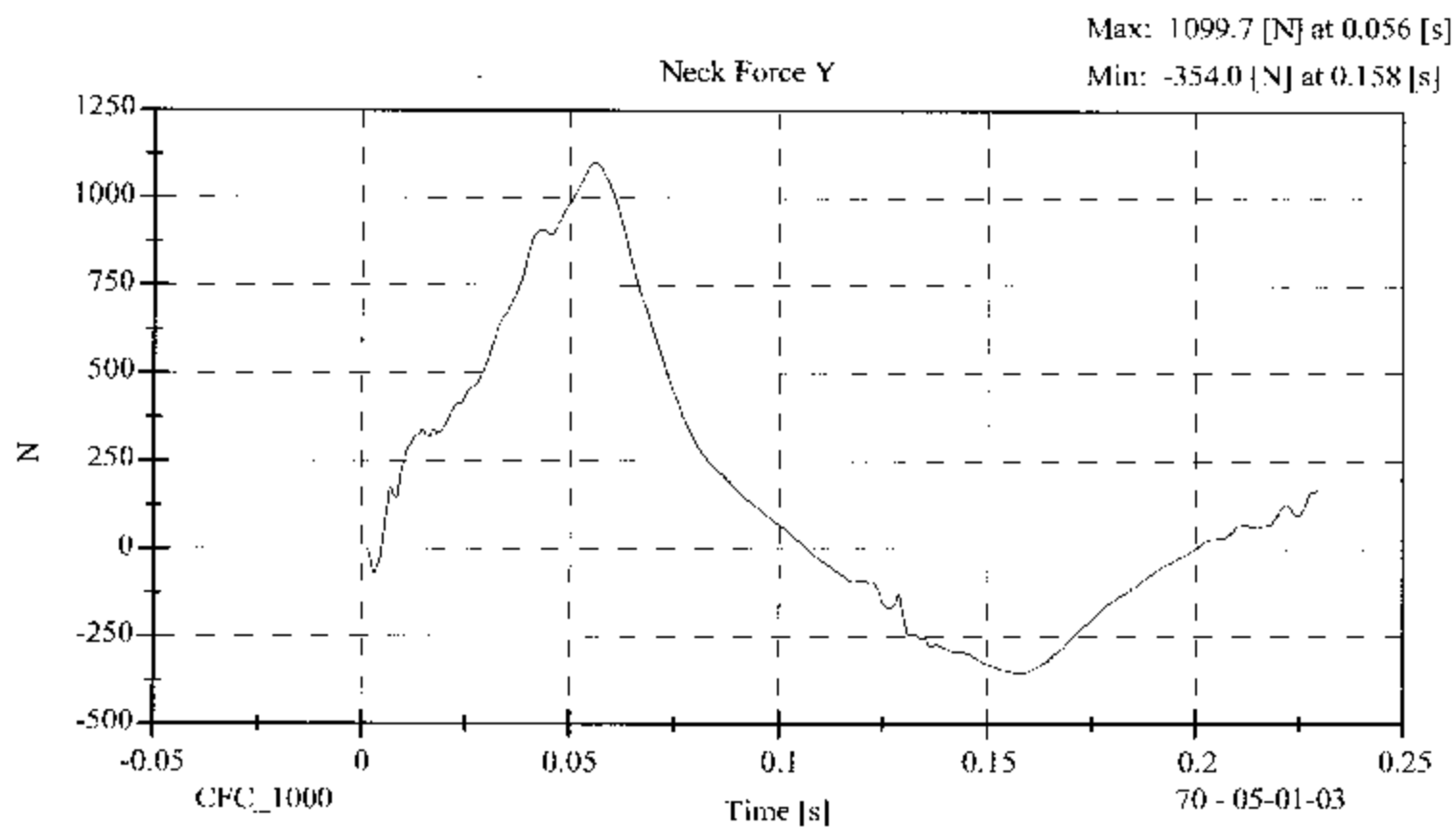
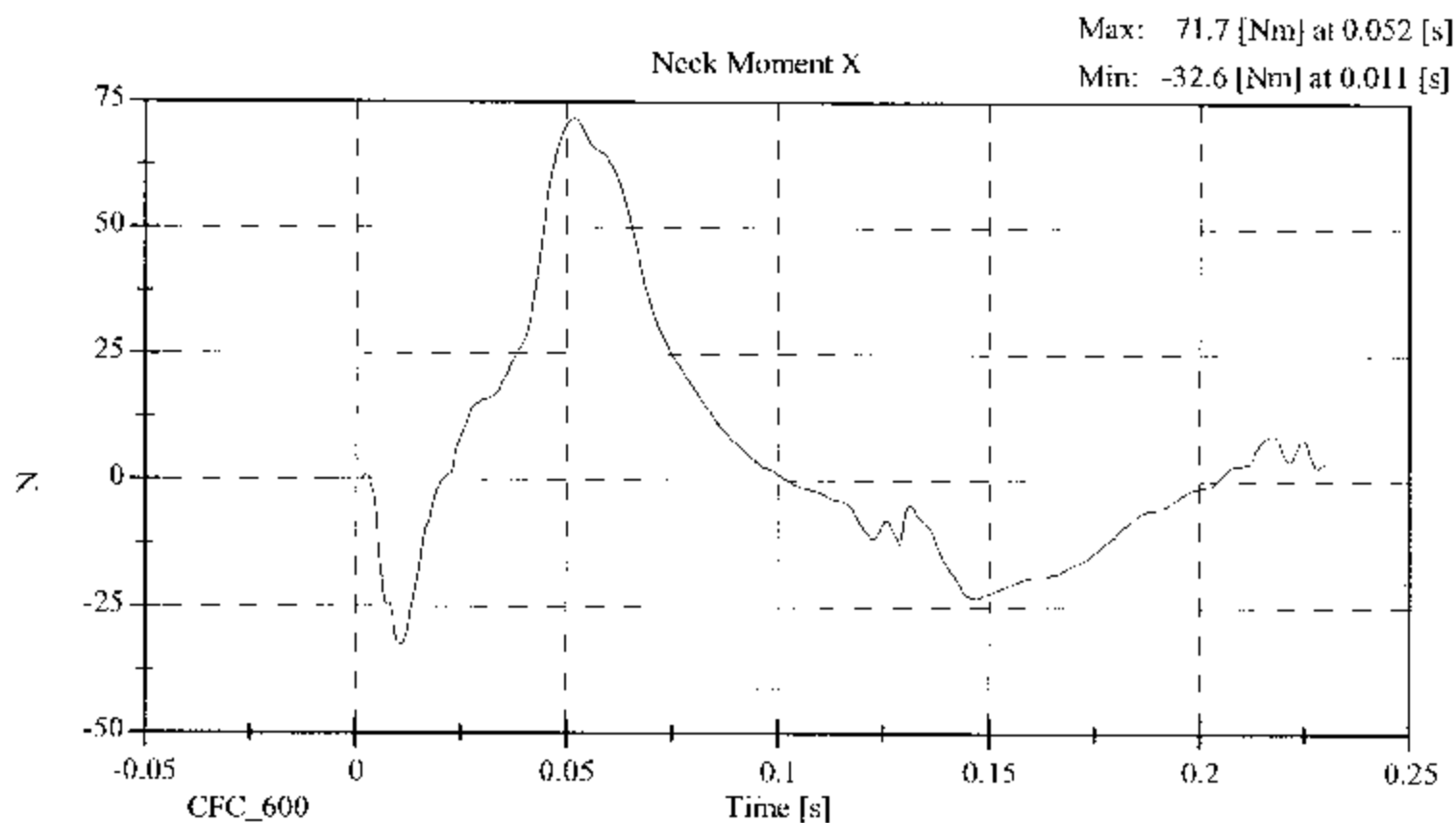
SID Serial No.: 016 Sequential Test Number: 2
 Date: May 1, 2003 Laboratory Technician: B. Swiecicki

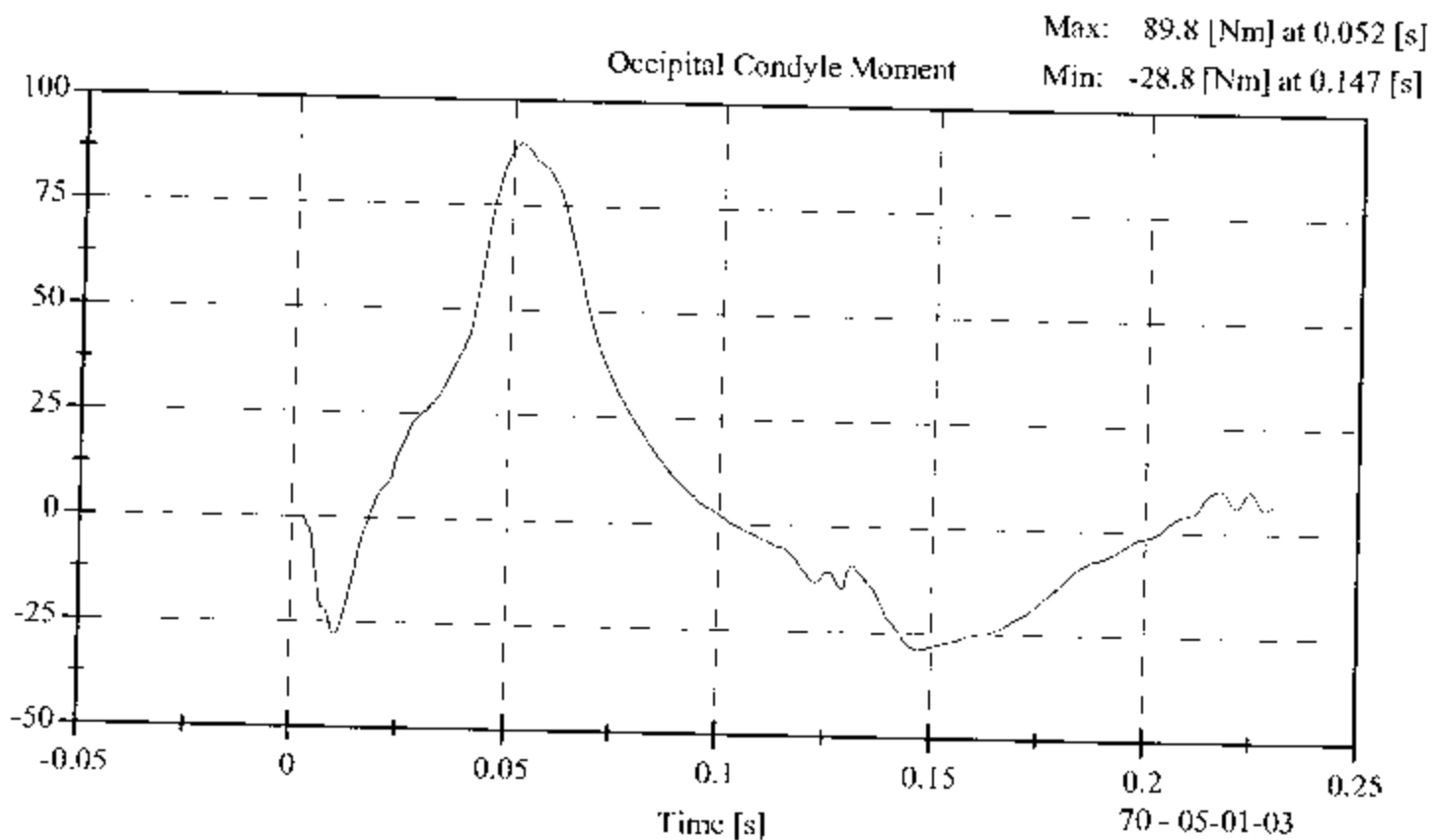
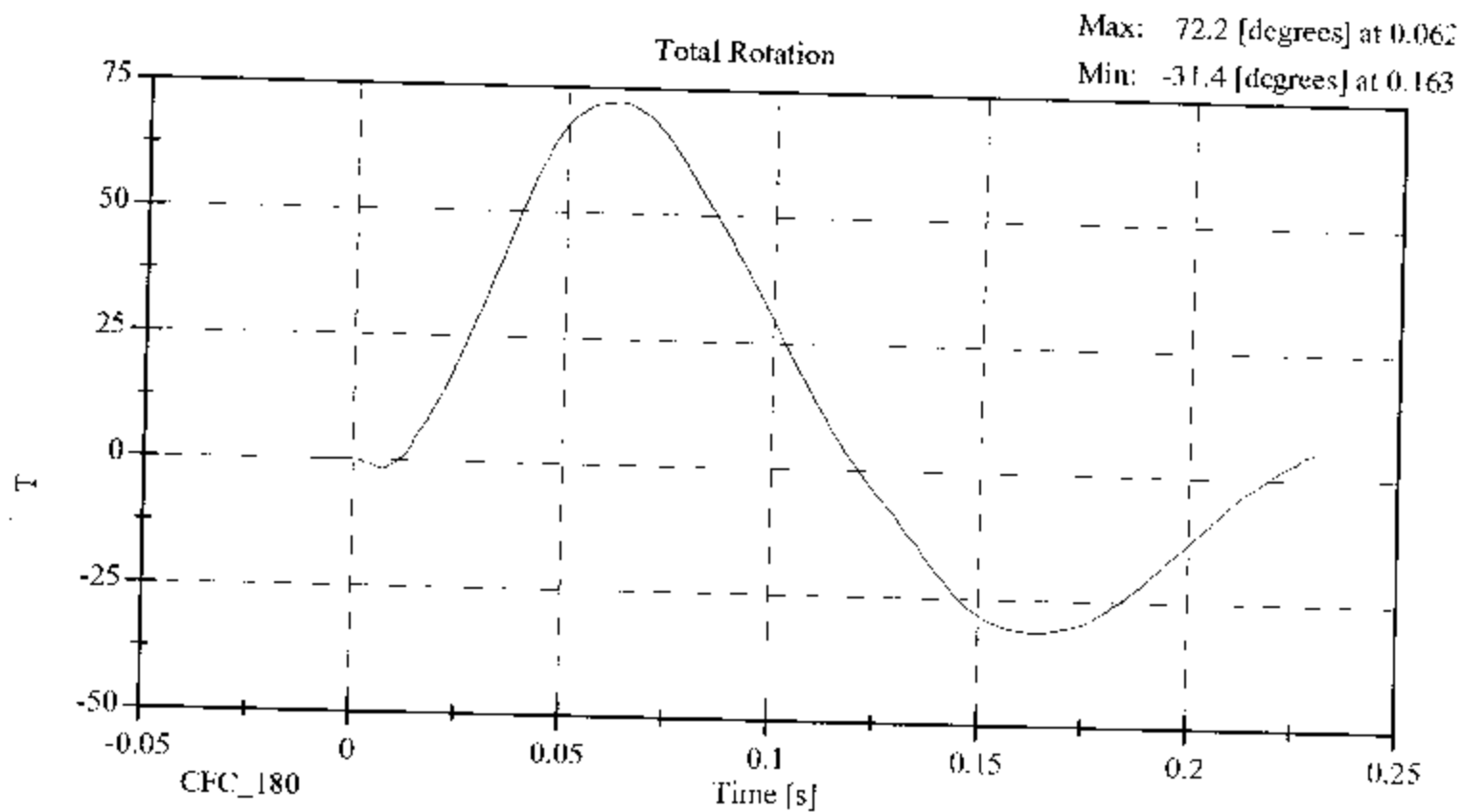
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.97
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.05
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.13
DELTA V @ 30 ms (m/s)	5.73 - 7.01	6.00
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.01
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	72.21
ROT. ANGLE TIME to ZERO (ms)	50 - 70	58.60
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	89.83
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	51.70
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	10.40

REMARKS: None









**ABDOMINAL COMPRESSION TEST
PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

STD H3 Serial No.: 016

Sequential Test Number:

2

Date: May 2, 2003

Laboratory Technician:

B. Swieczki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	47.0
FORCE @ 13 mm (N)	104 - 162	118.3
FORCE @ 19 mm (N)	163 - 221	186.8
FORCE @ 25 mm (N)	222 - 280	259.6
FORCE @ 33 mm (N)	325 - 391	361.2

REMARKS: None

Dummy S/N 016

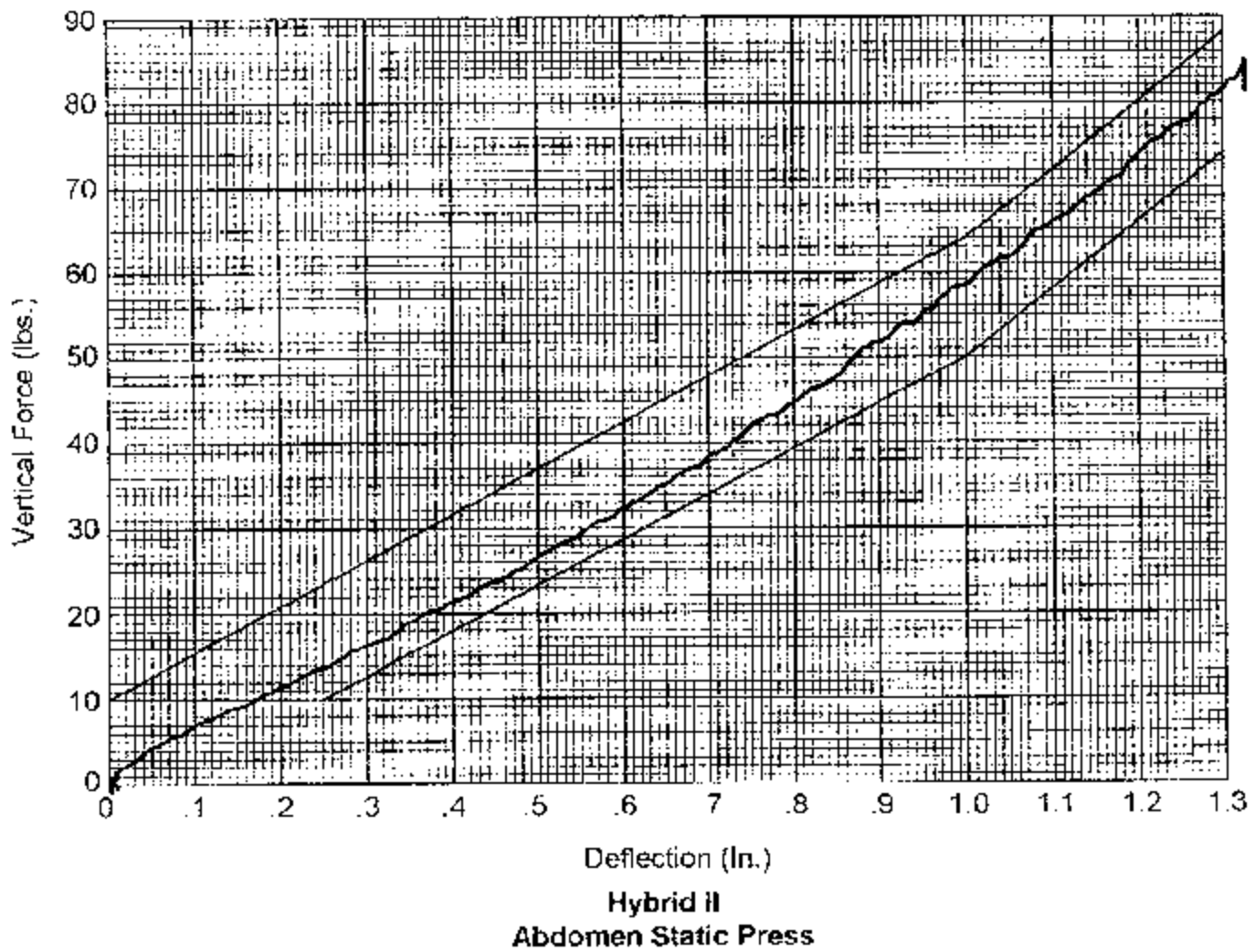
W/A _____

Date 5-02-03

Performed By [Signature]

Temp. 75

Humidity 31%



LUMBAR FLEXION TEST
PRE-TEST
 (Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016

Sequential Test Number: 2

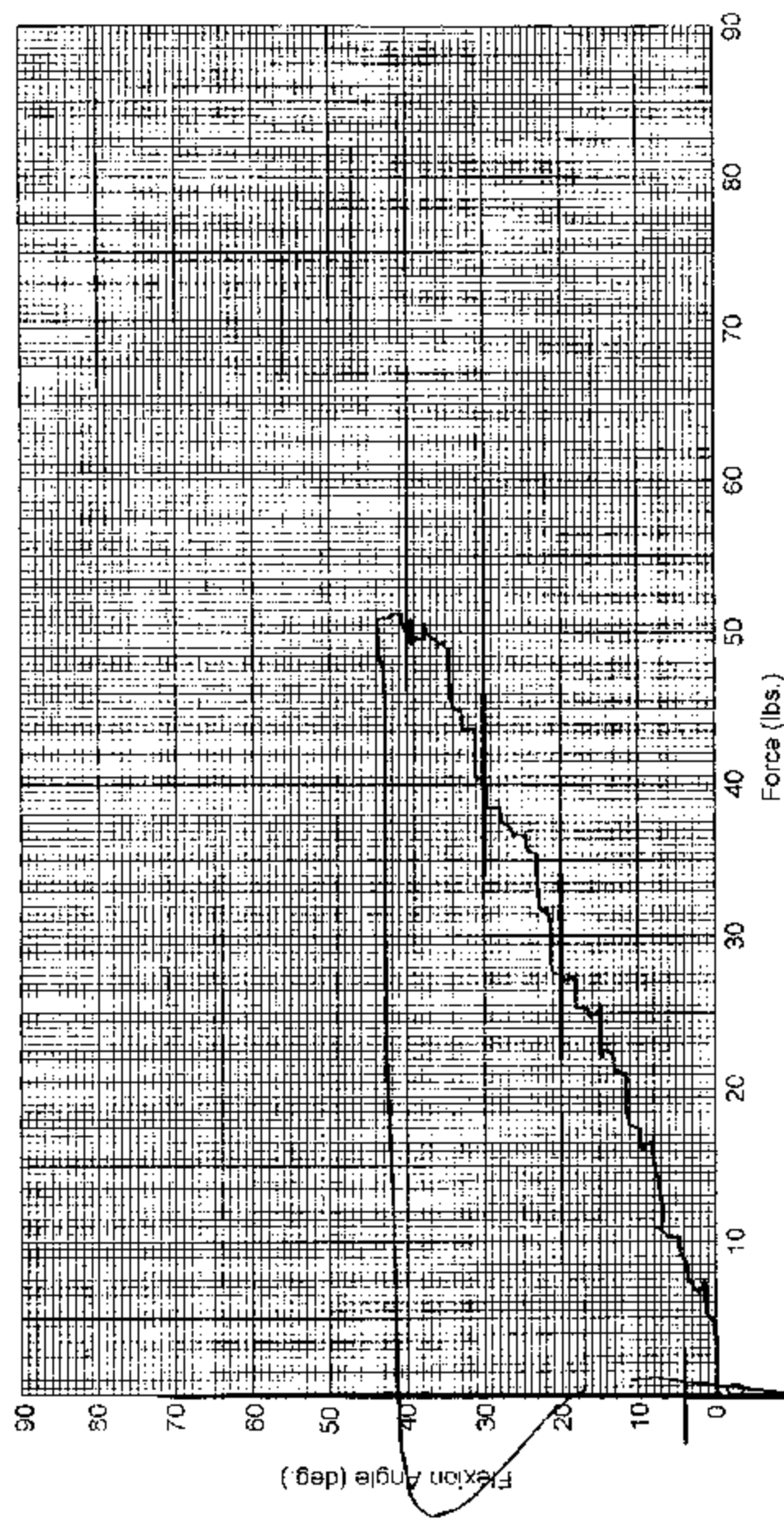
Date: May 2, 2003

Laboratory Technician: B. Swieczeki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	37.0
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	121.9
FORCE @ 30° (N)	151.2 - 204.6	178.8
FORCE @ 40° (N)	204.6 - 258	223.7
RETURN ANGLE	12° max.	4°

REMARKS: None

Dummy S/N 016
 WIA _____
 Date 5-03-03
 Performed By [Signature]
 Temp. 70°
 Humidity 32%



Hybrid II Lumbar Spine Flexion Test

FM-002-CES T-005-R00

PC02052 ISO Forms

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 2
 Date: May 2, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PCLVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS
POST TEST

SID H3 NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swicicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: R. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	511
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

**LATERAL THORAX IMPACT TEST
POST TEST**

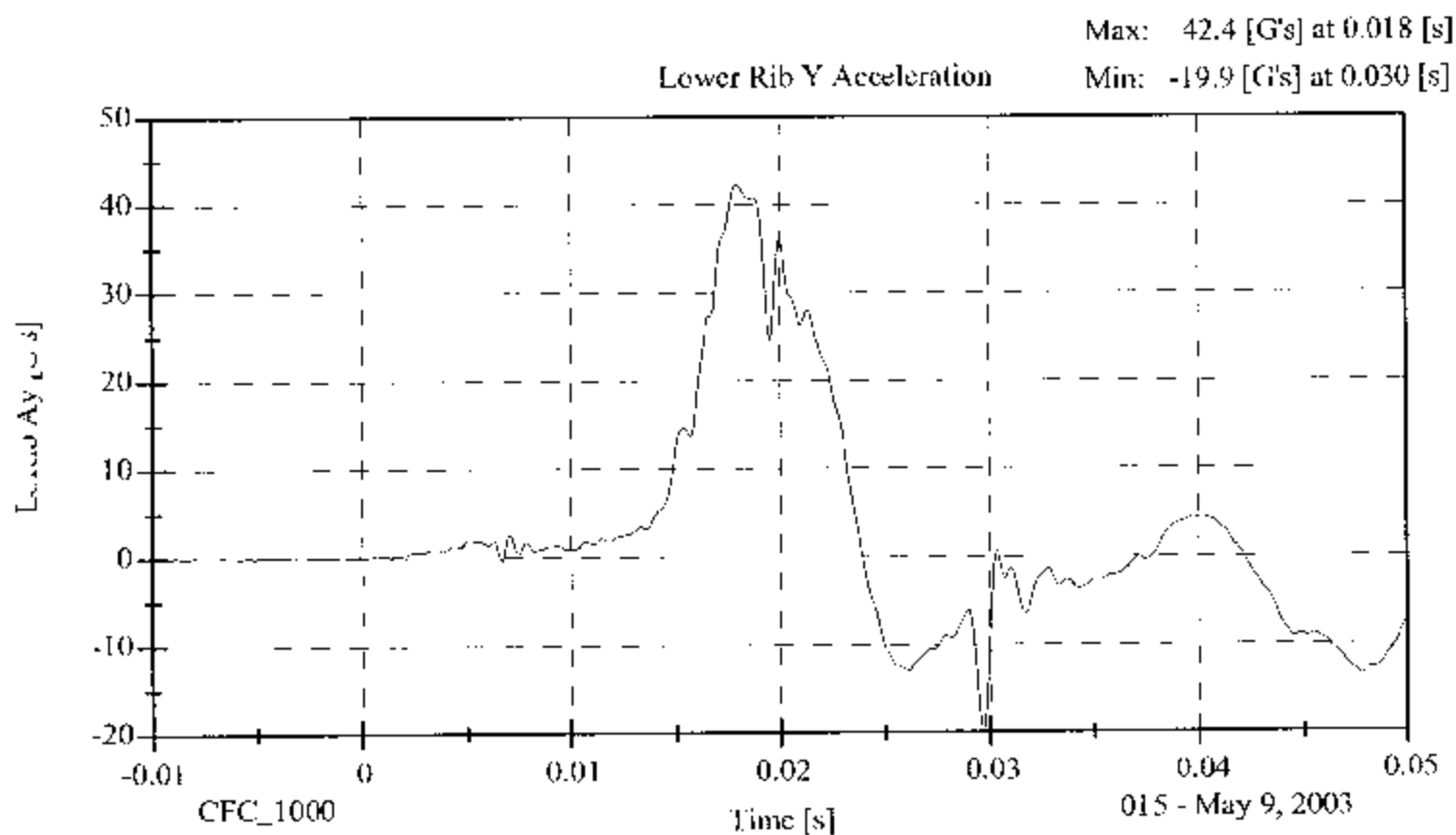
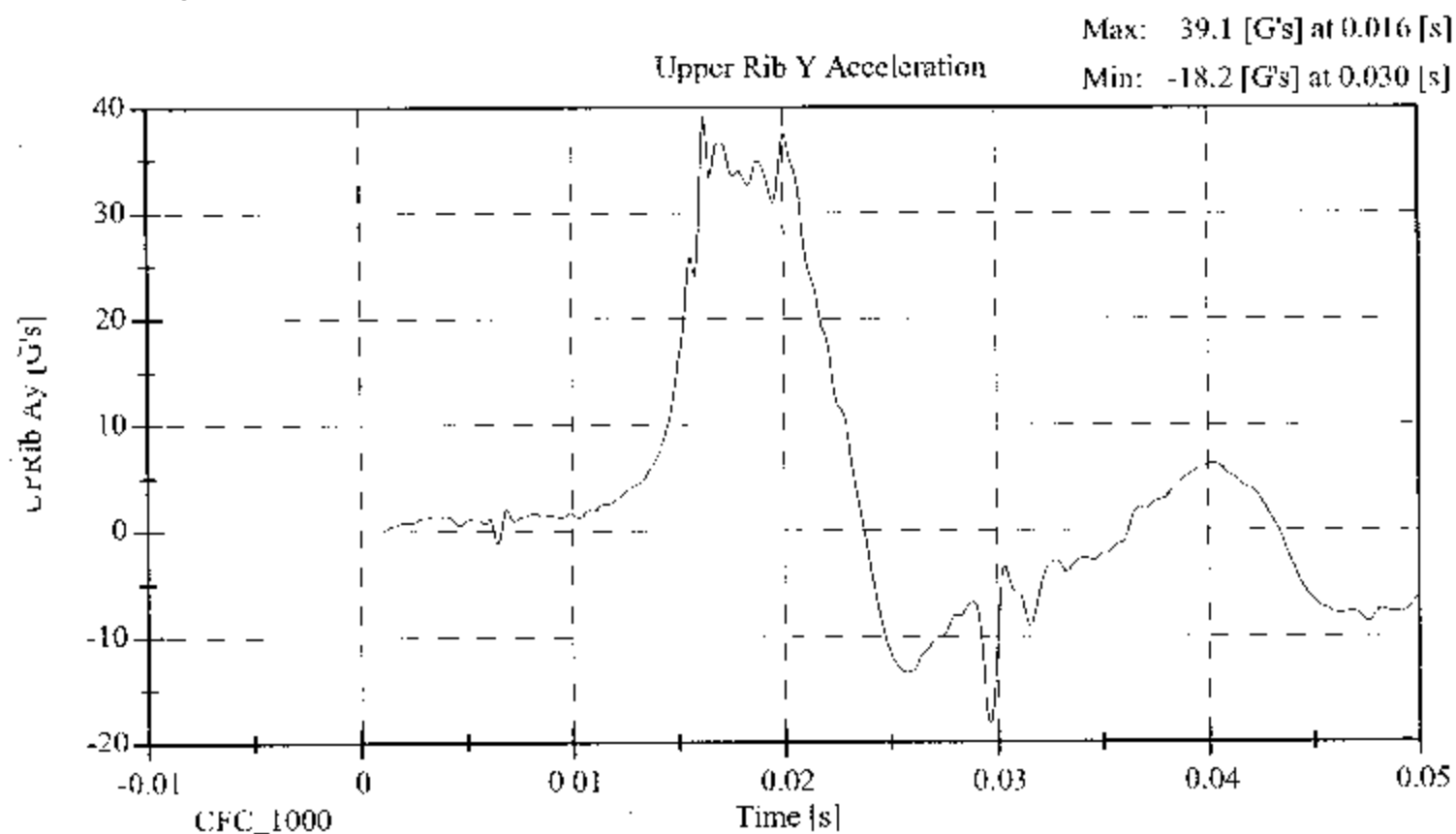
CONFIGURED FOR LEFT SIDE IMPACT

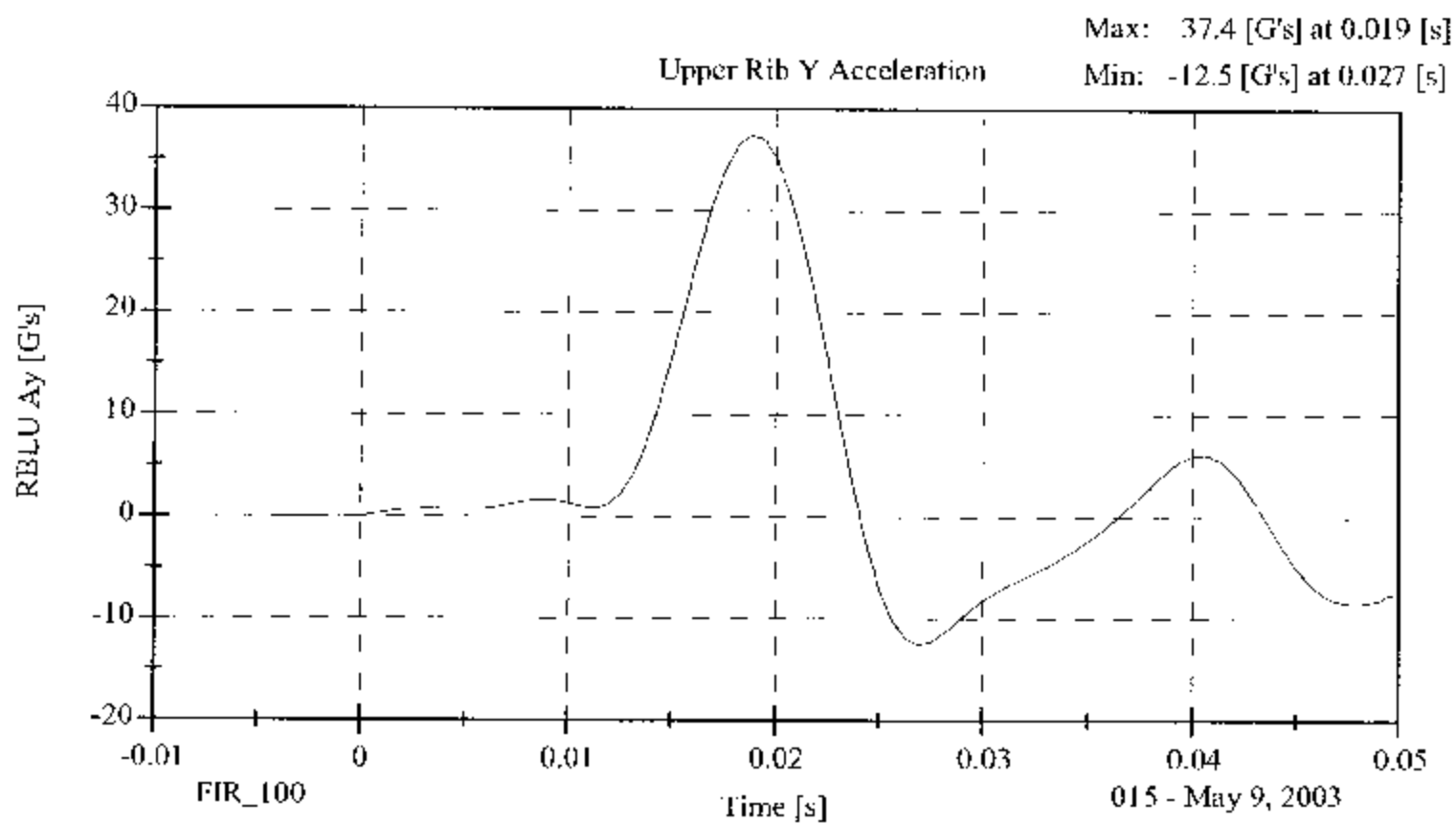
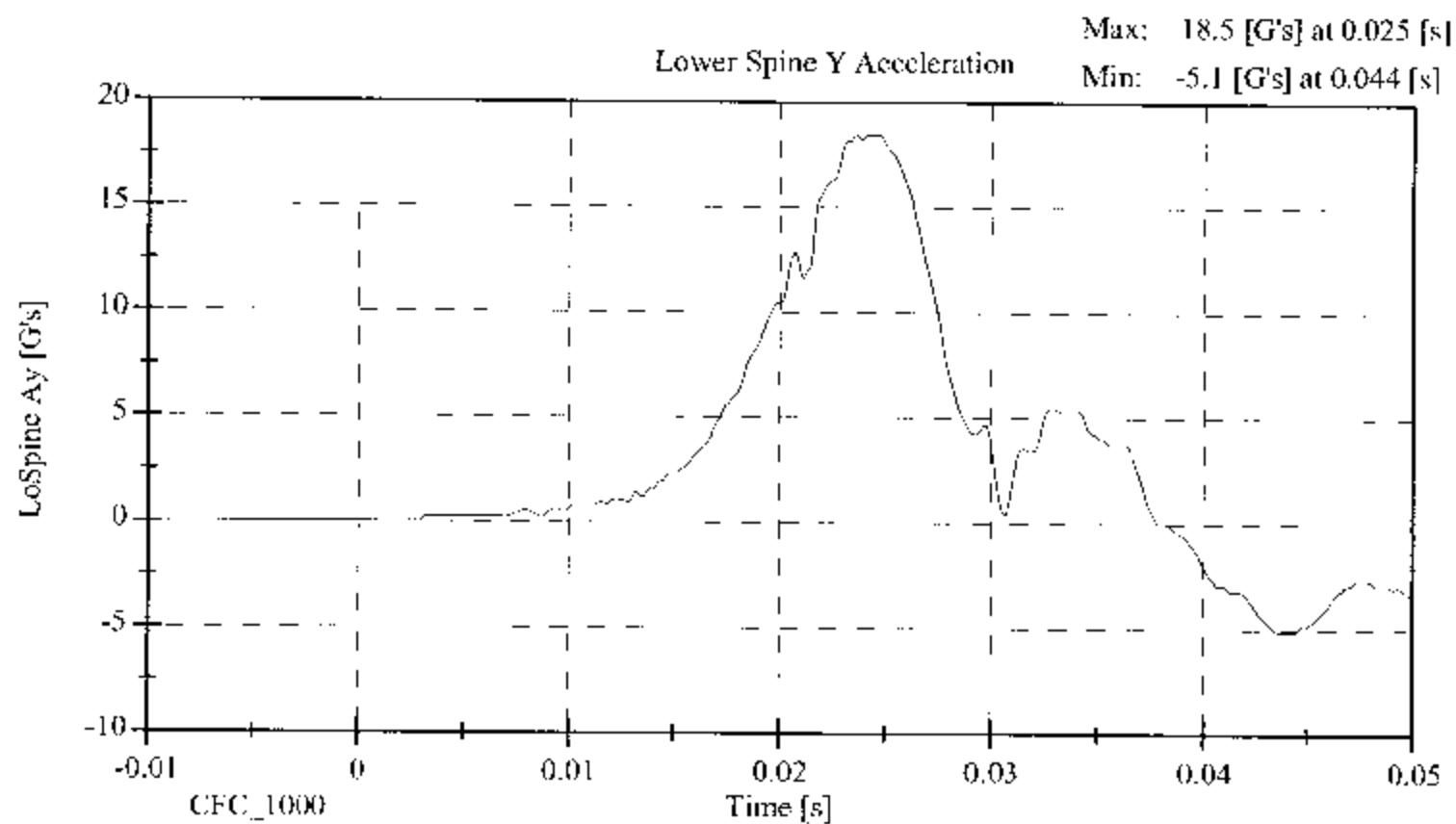
SID 113 Serial No.: 015 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.27
UPPER RIB (g's)	37 - 46	37.43
LOWER RIB (g's)	37 - 46	38.17
LOWER SPINE (g's)	15 - 22	18.55

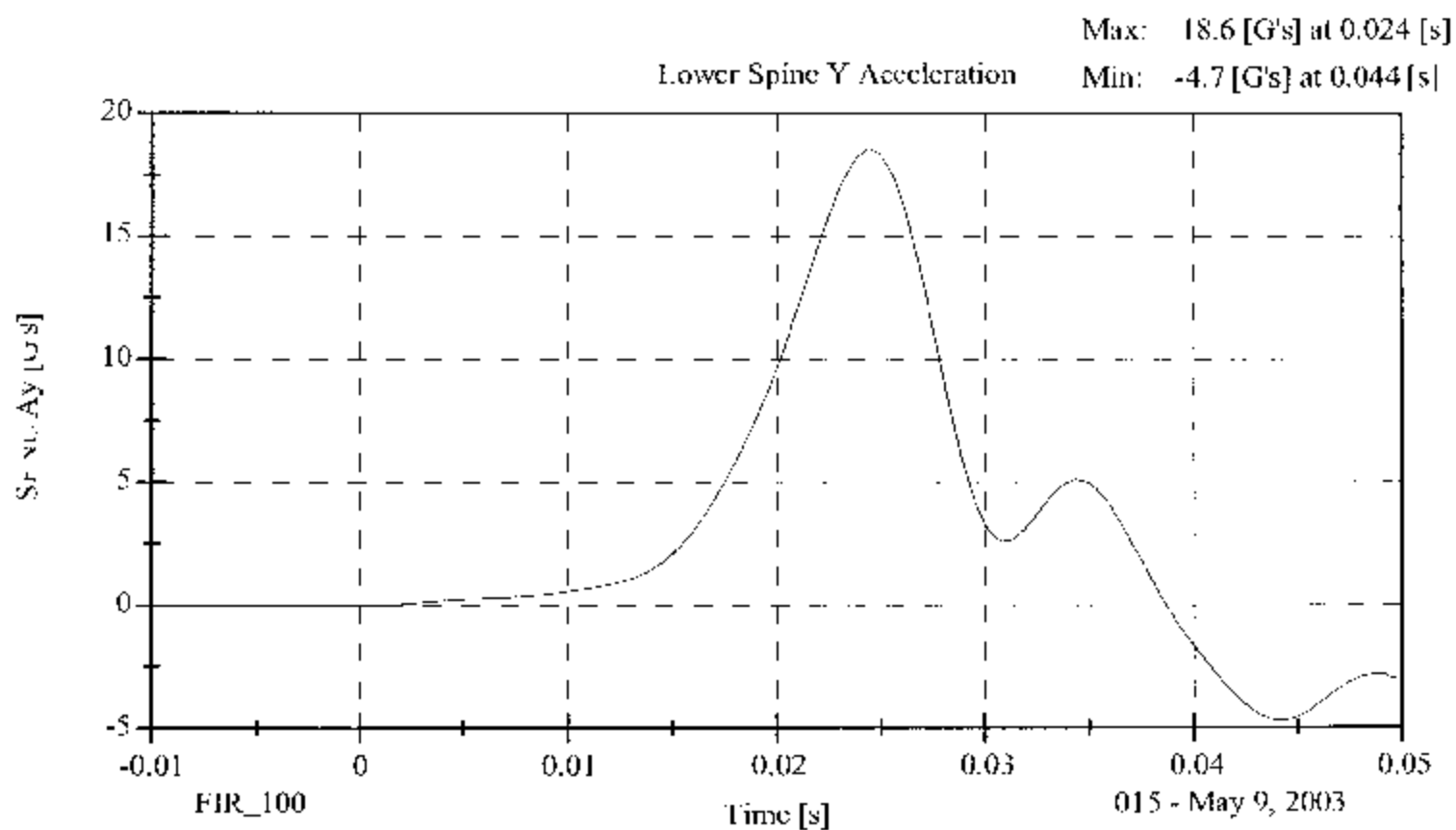
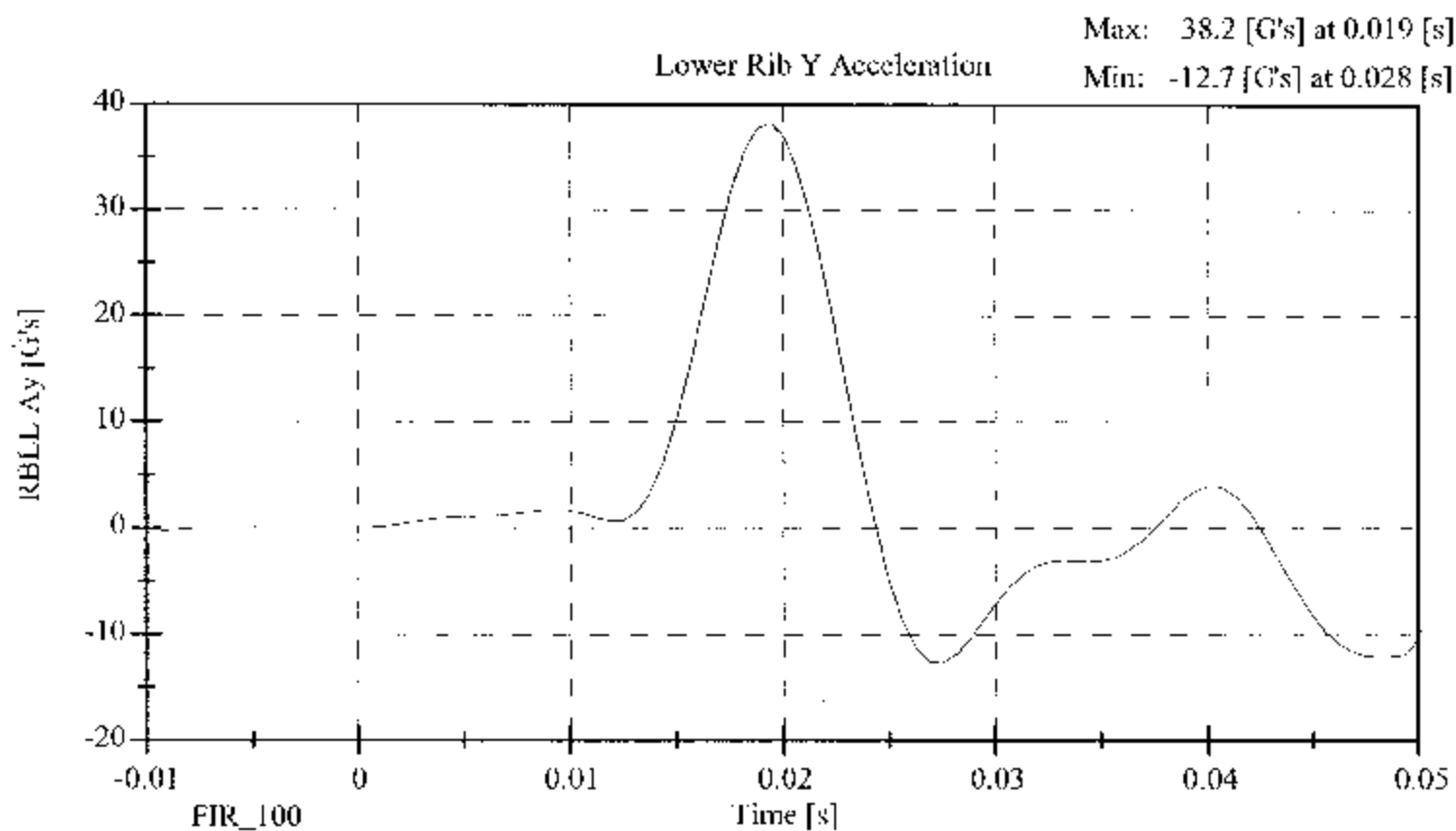
REMARKS: None

Thorax Impact





015 - May 9, 2003



**LATERAL PELVIS IMPACT TEST
POST TEST**

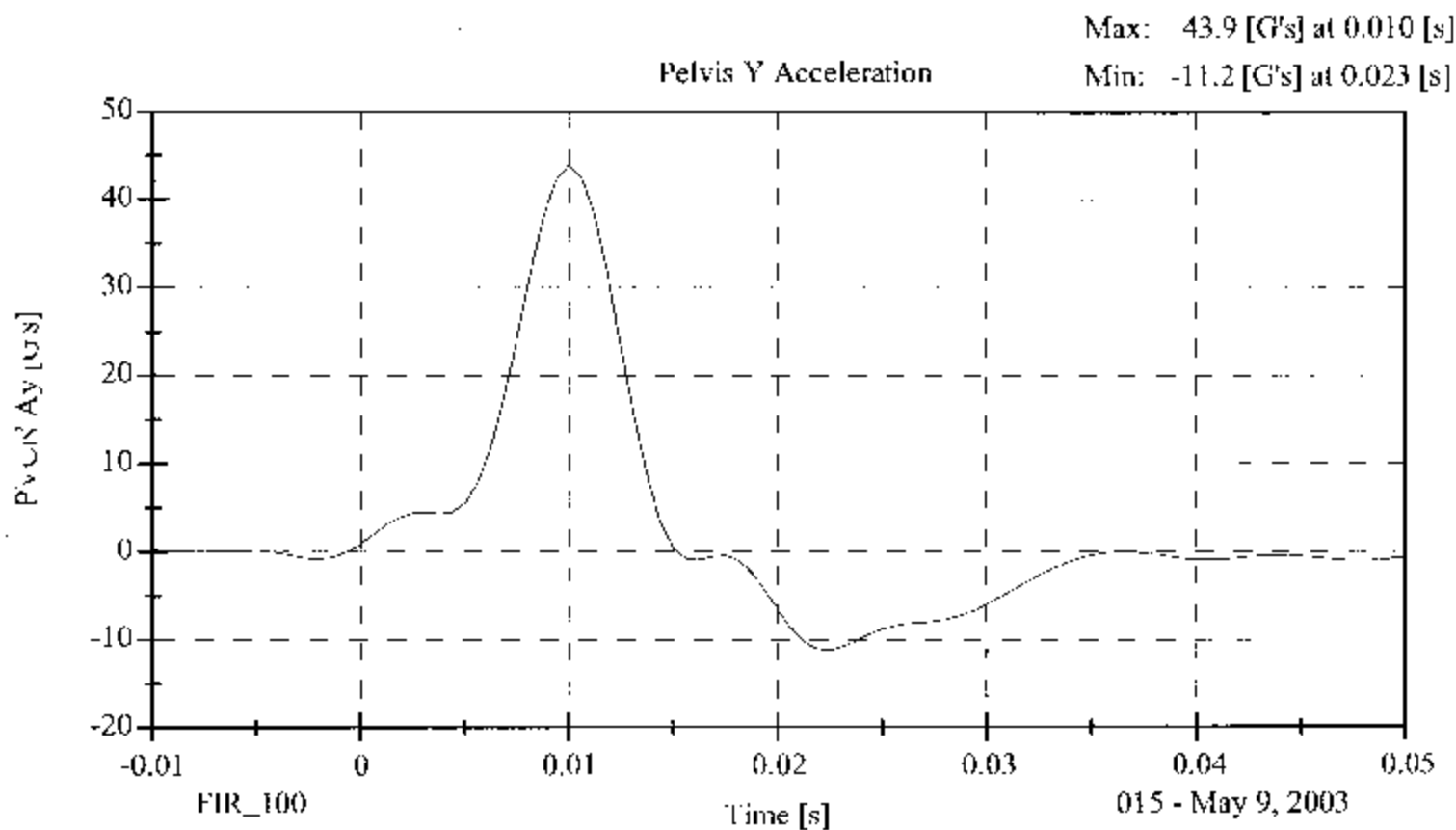
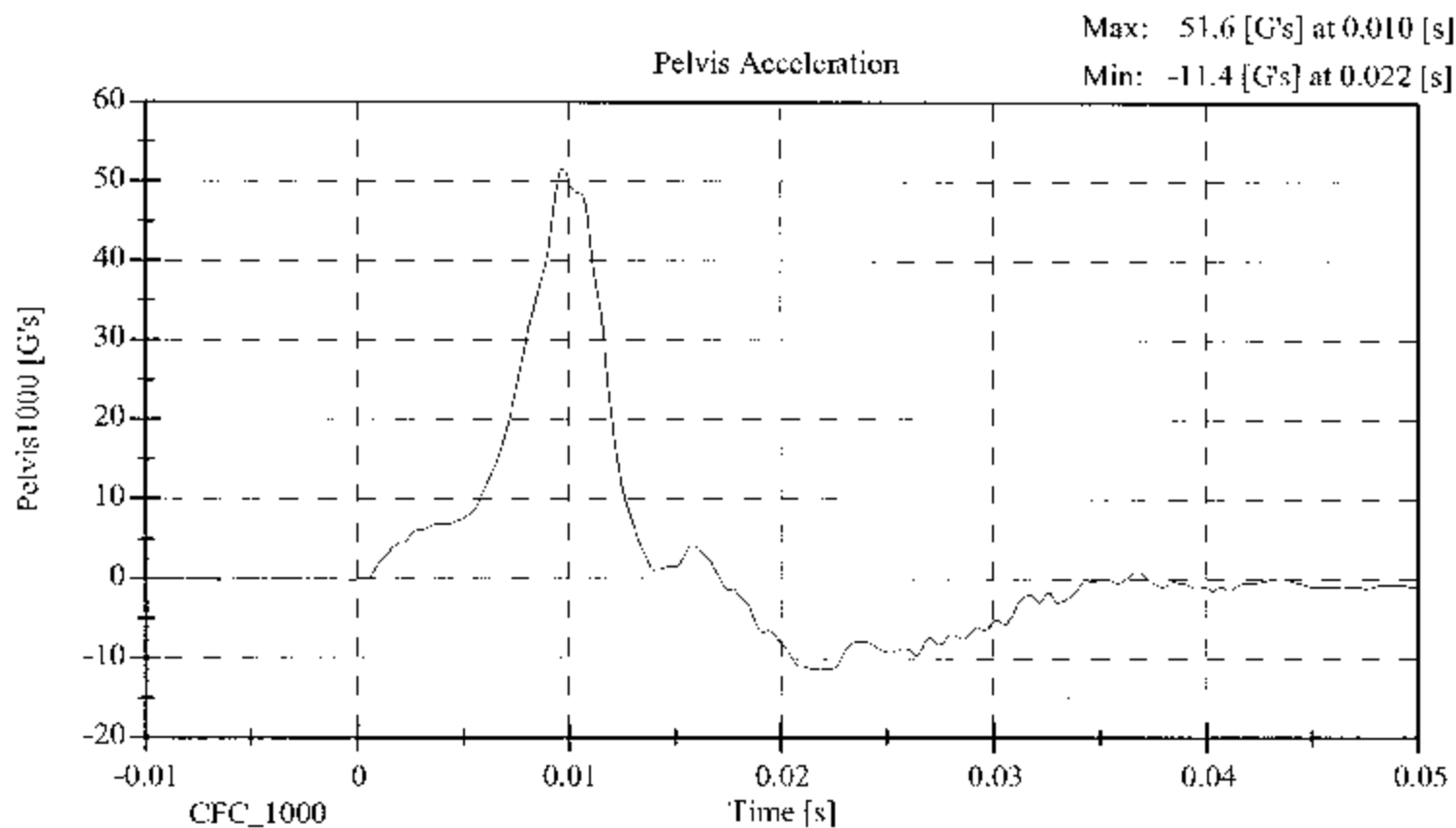
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swicicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	43.89

REMARKS: None

Pelvic Impact



**HEAD DROP TEST
POST-TEST**

(Test not required for SID certification)

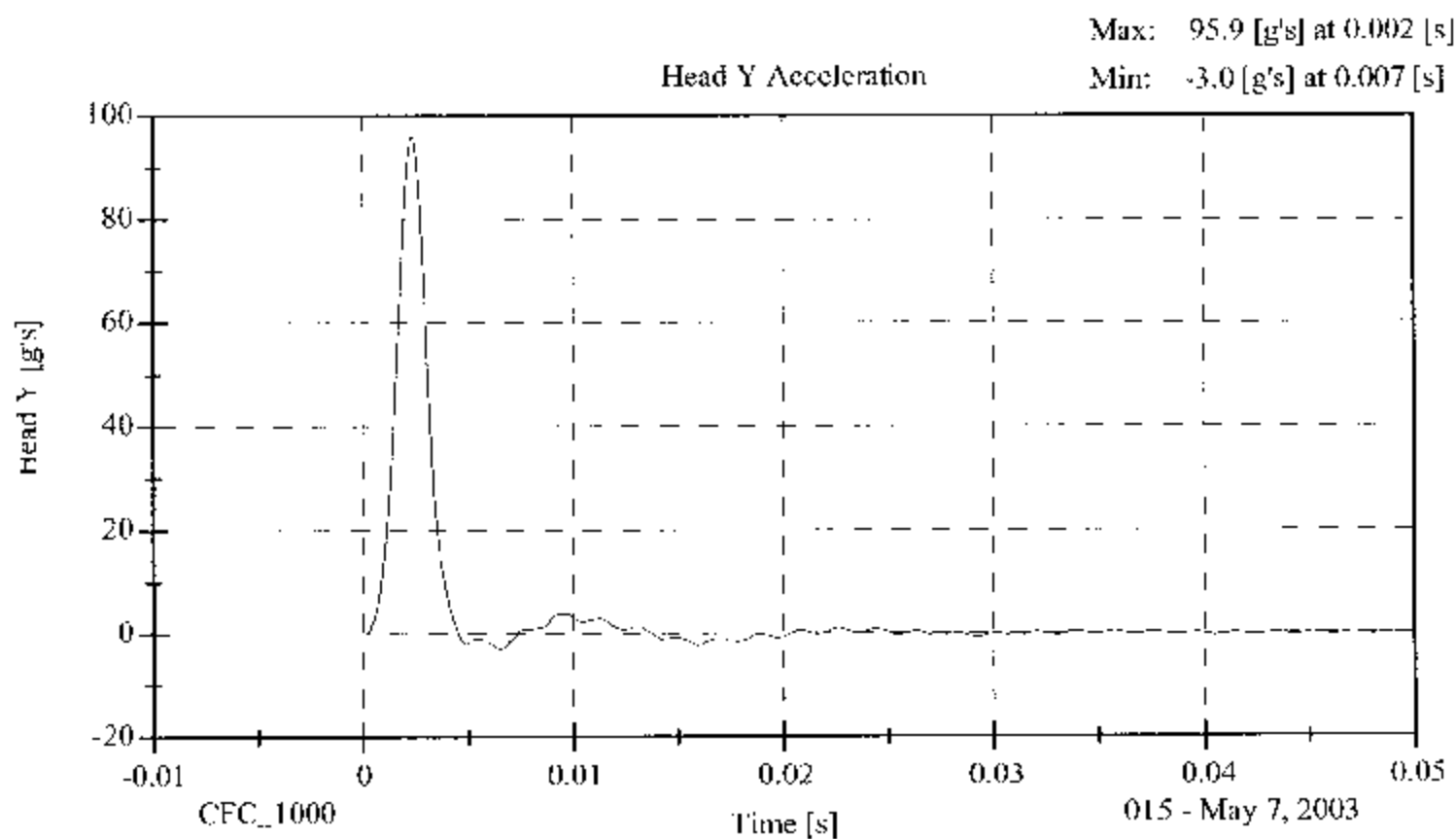
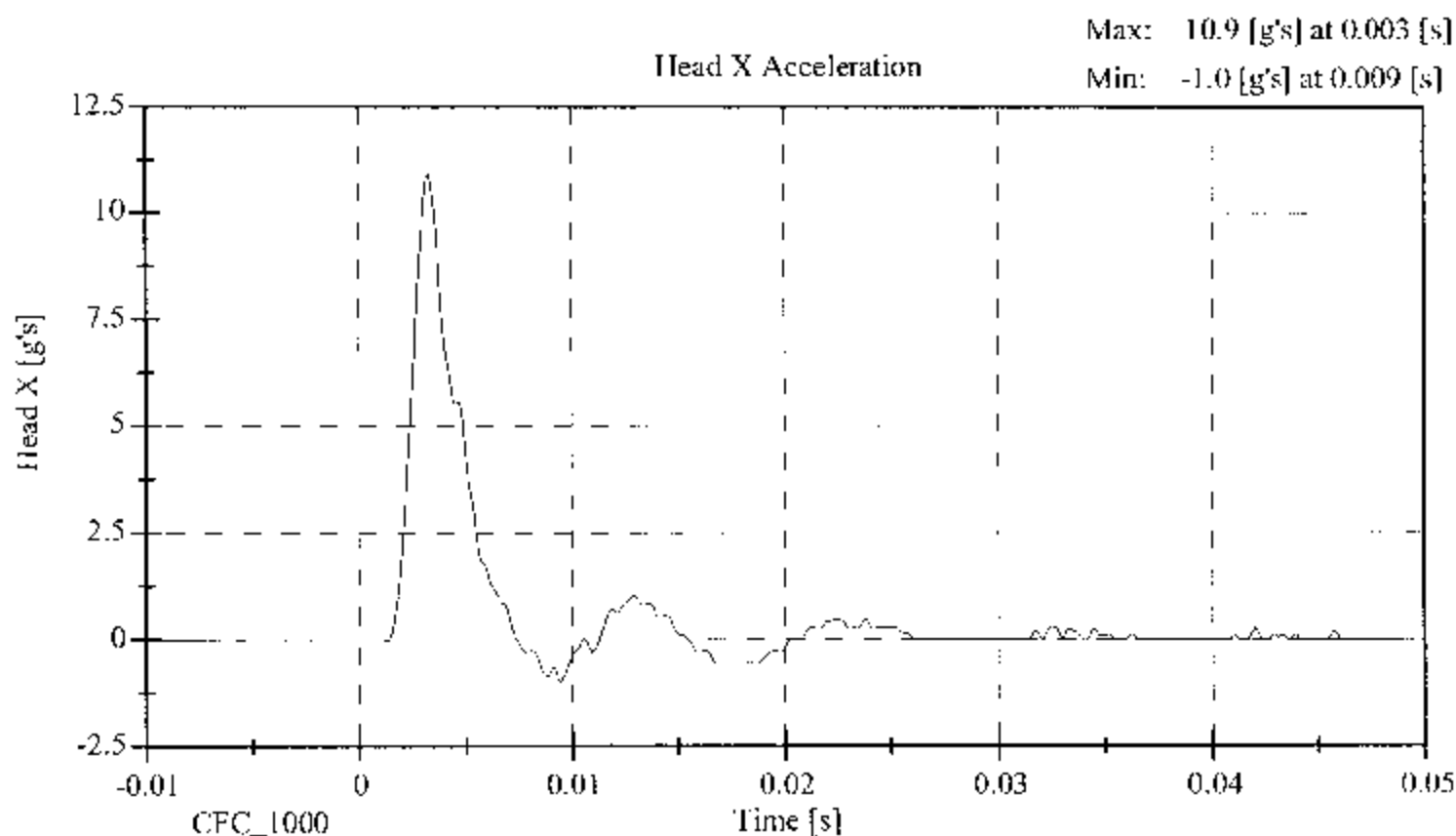
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 3
Date: May 7, 2003 Laboratory Technician: B. Swieticki

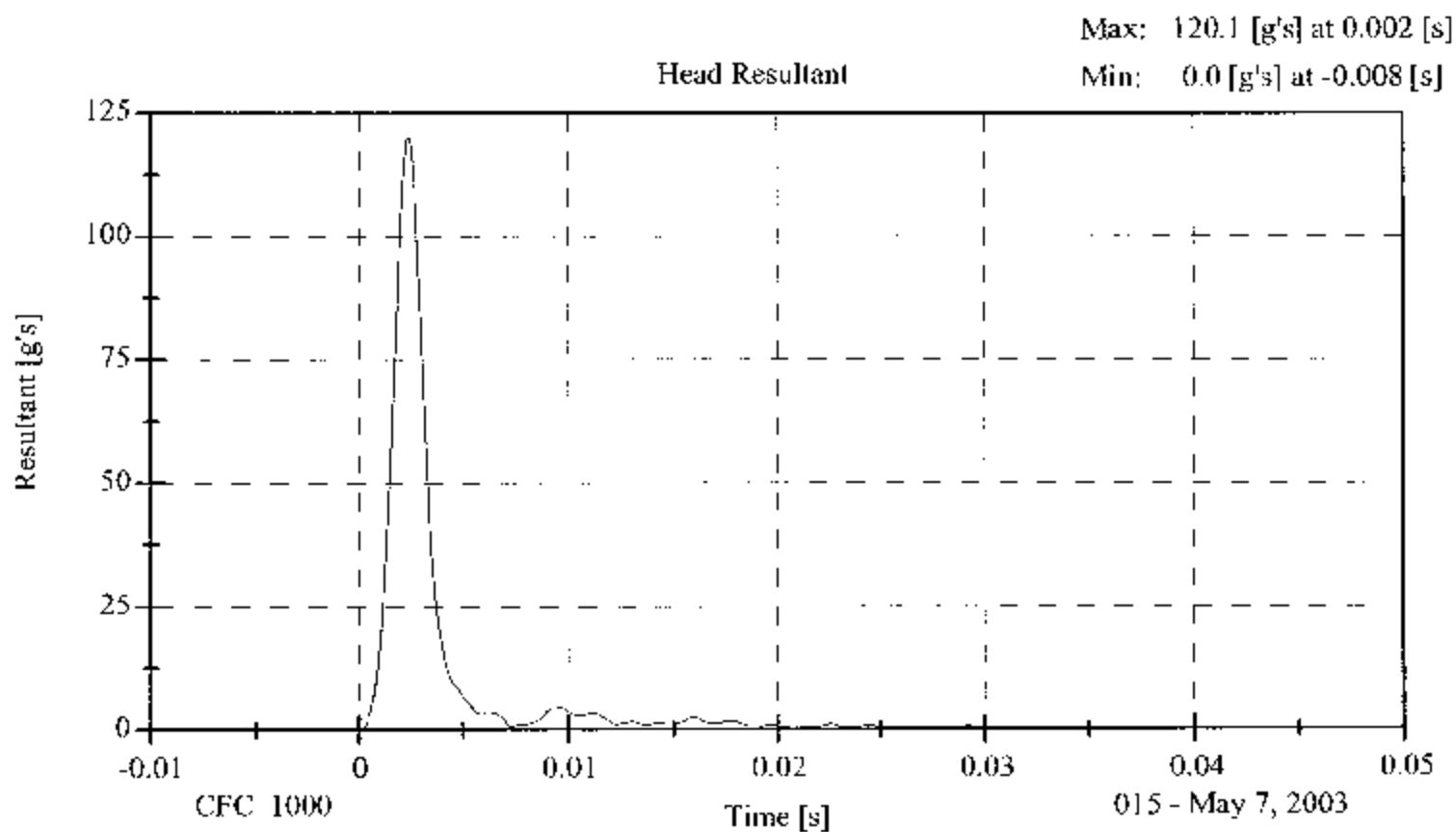
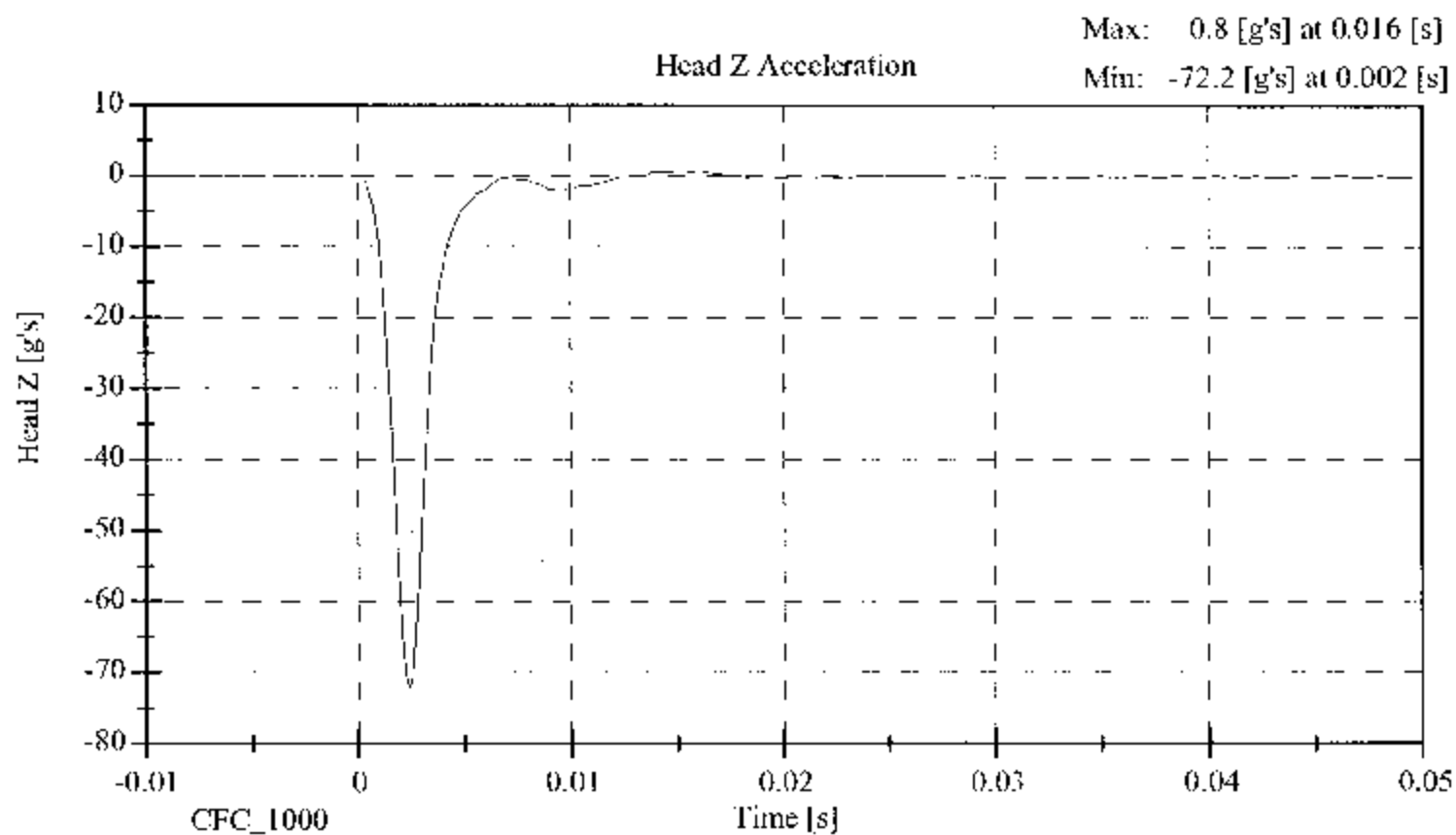
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 – 22.2	21.1
RELATIVE HUMIDITY (%)	10 – 70	33.00
PEAK RESULTANT ACCELERATION (Gs)	120 – 150	120.13
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	10.92
CURVE PERCENT NONMODAL (%)	< 15	3.72

REMARKS: None

Head Drop



Head Drop



**LATERAL NECK BENDING TEST
POST-TEST**

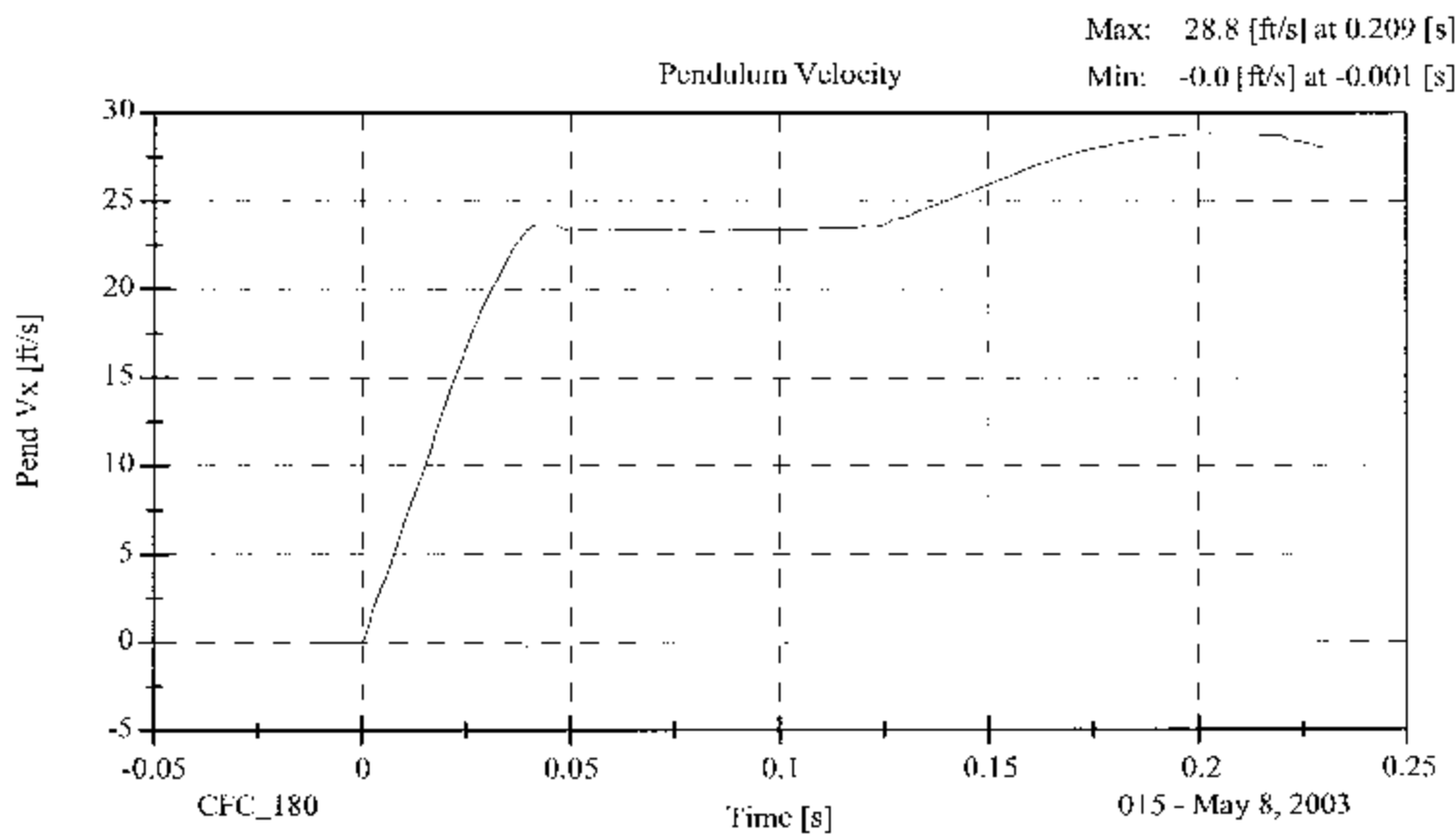
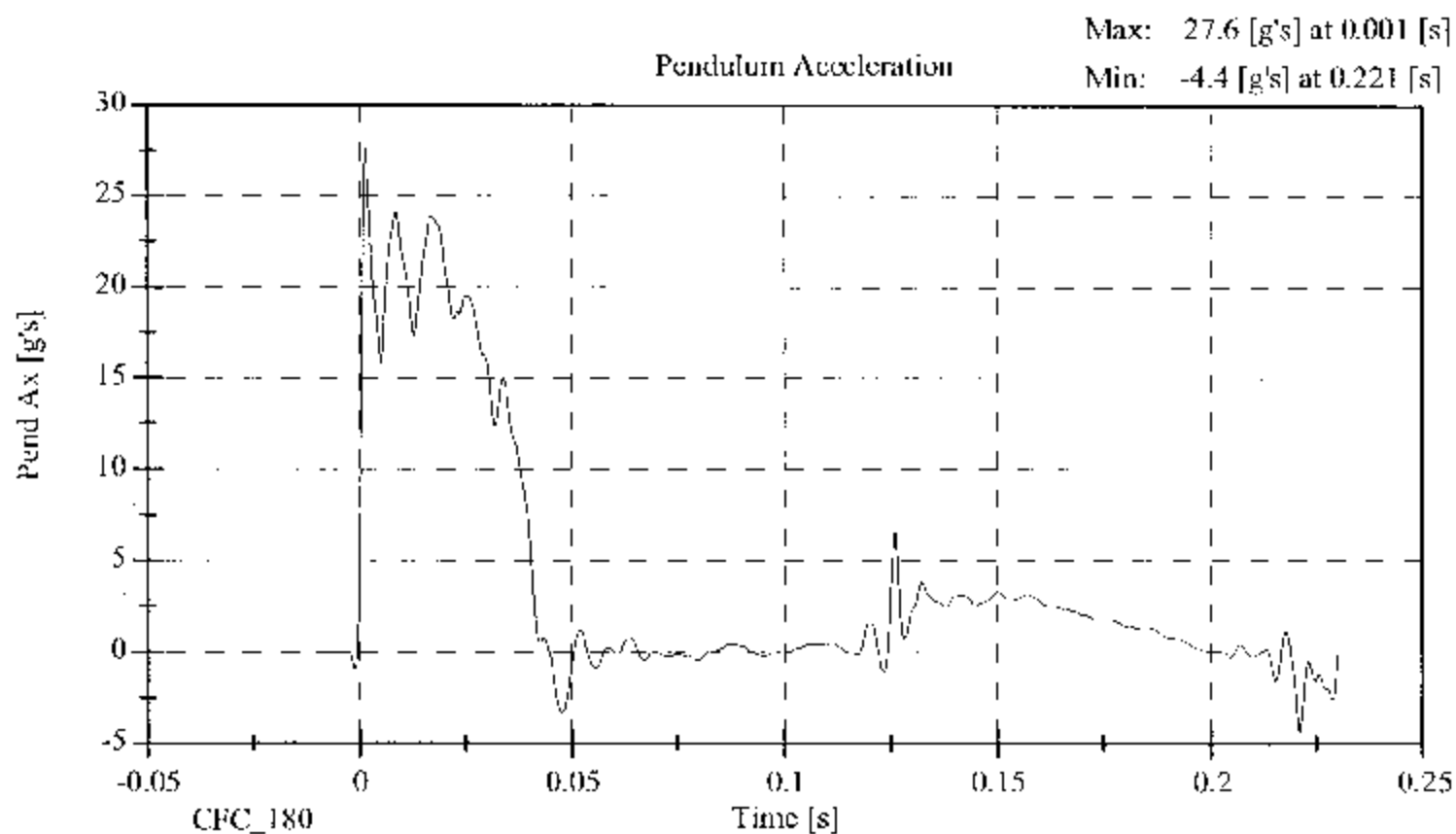
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

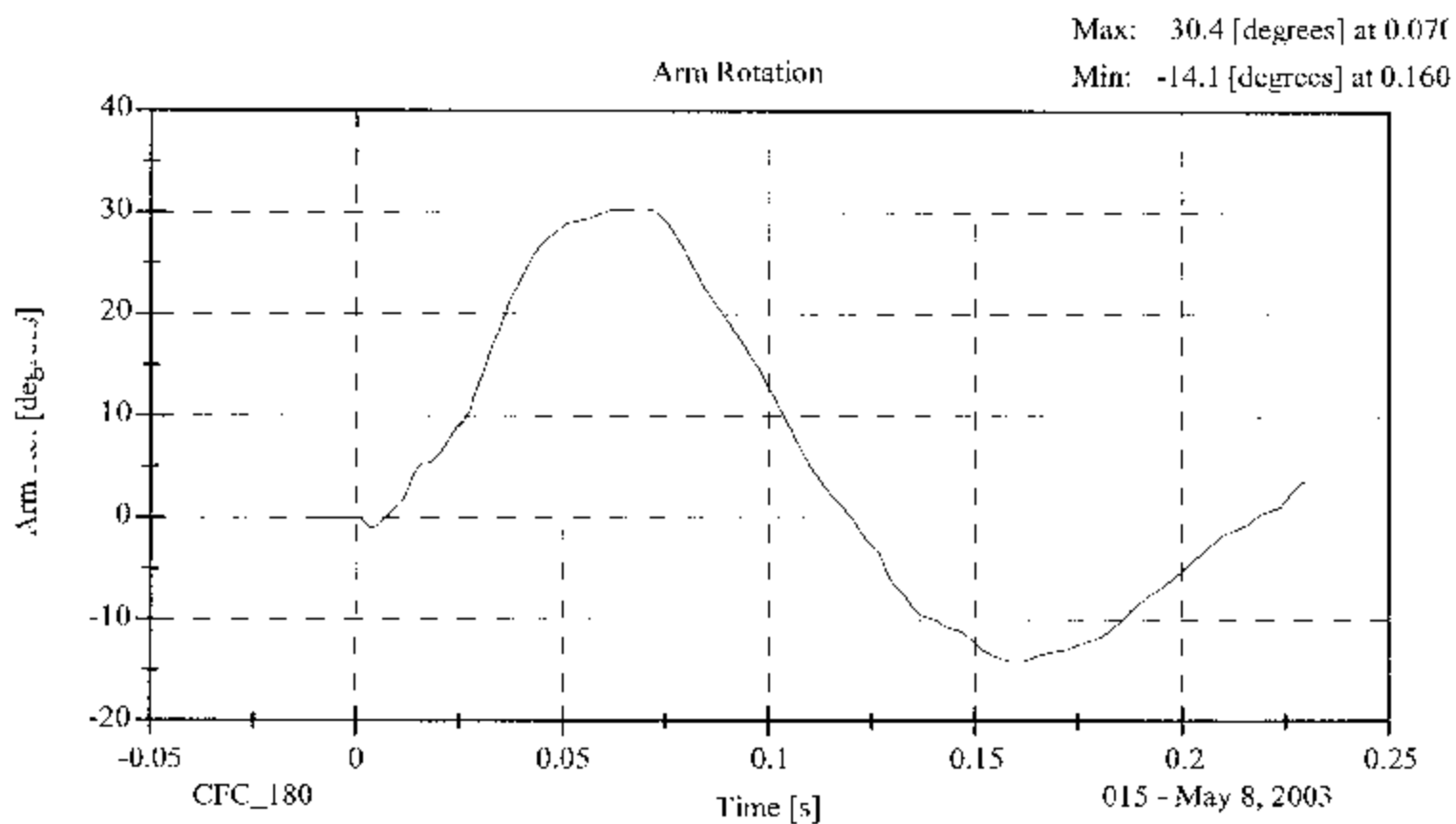
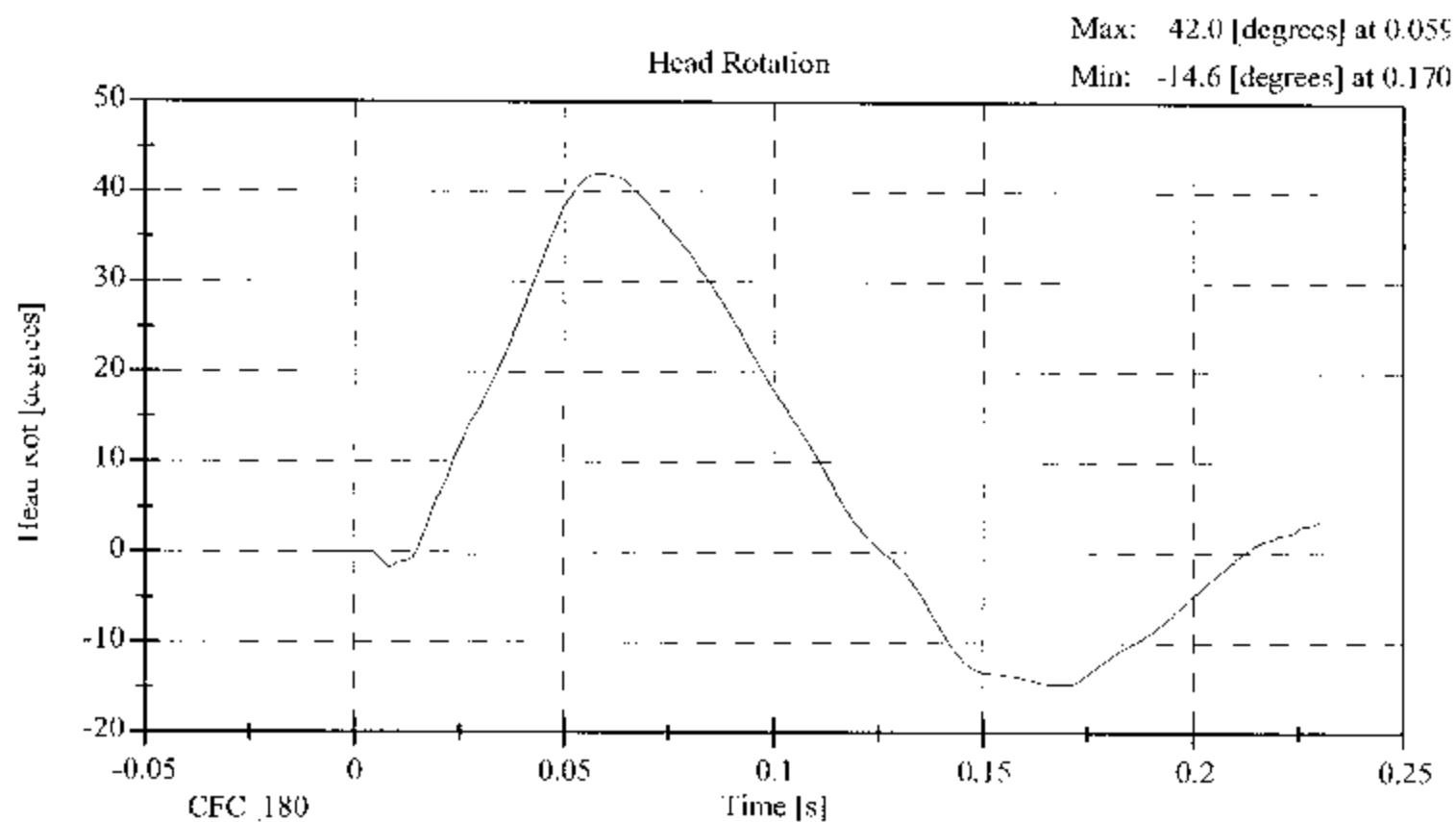
SID Serial No.: 015 Sequential Test Number: 3
Date: May 8, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	33.00
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.92
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.06
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.14
DELTA V @ 30 ms (m/s)	5.73 - 7.01	5.96
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.22
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	71.93
ROT. ANGLE TIME to ZERO (ms)	50 - 70	60.10
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	90.93
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	49.30
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	9.30

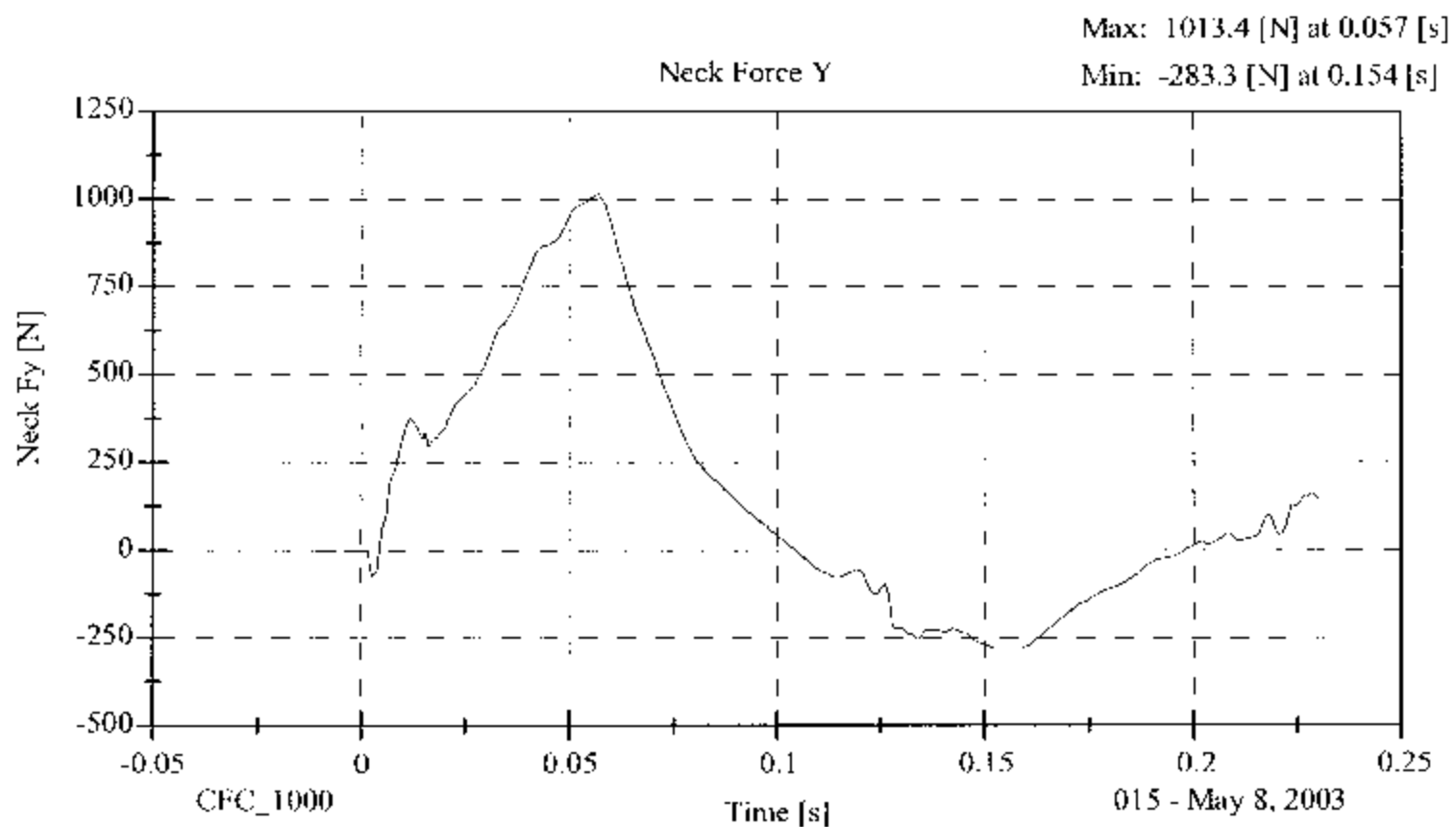
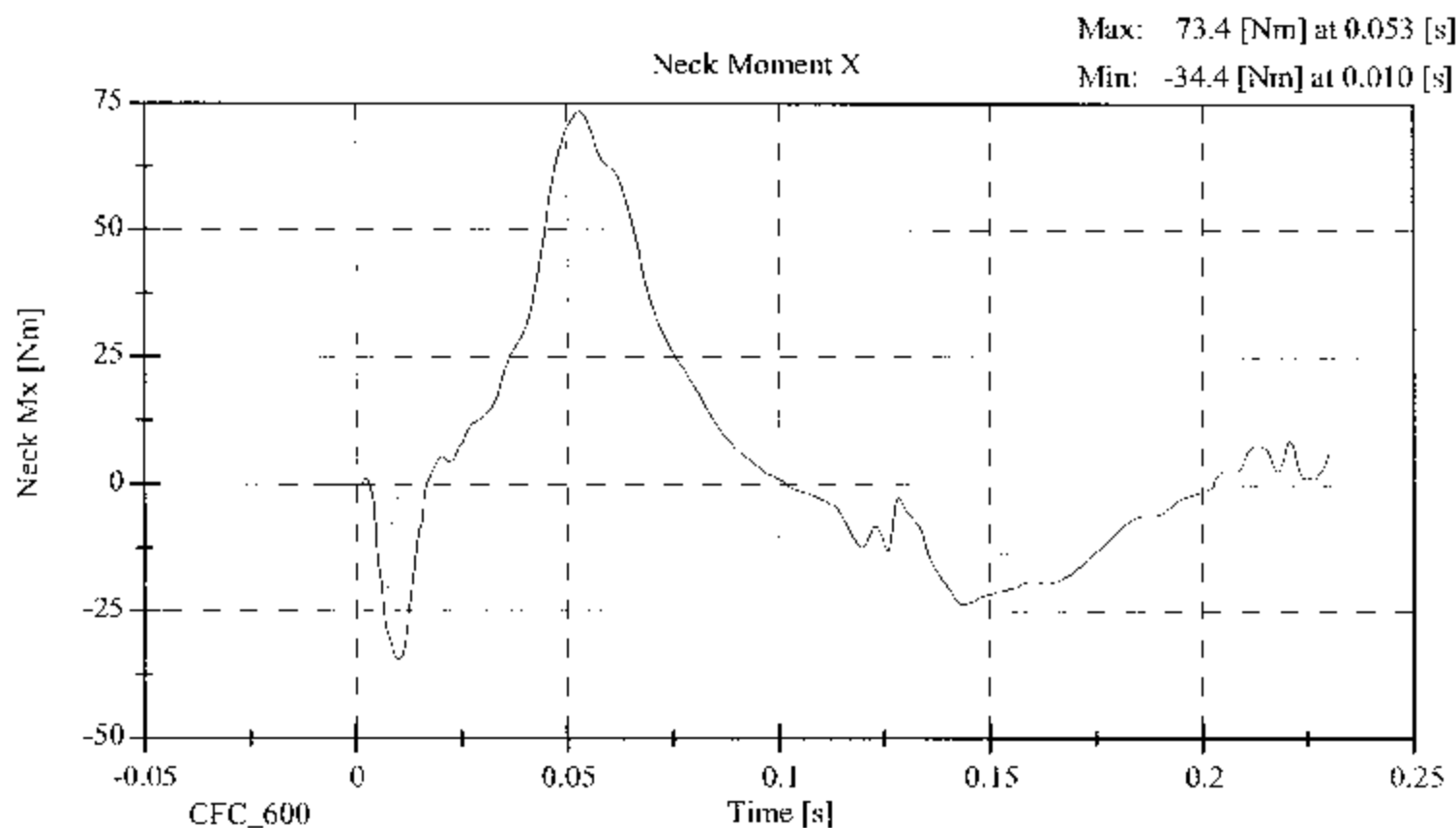
REMARKS: None



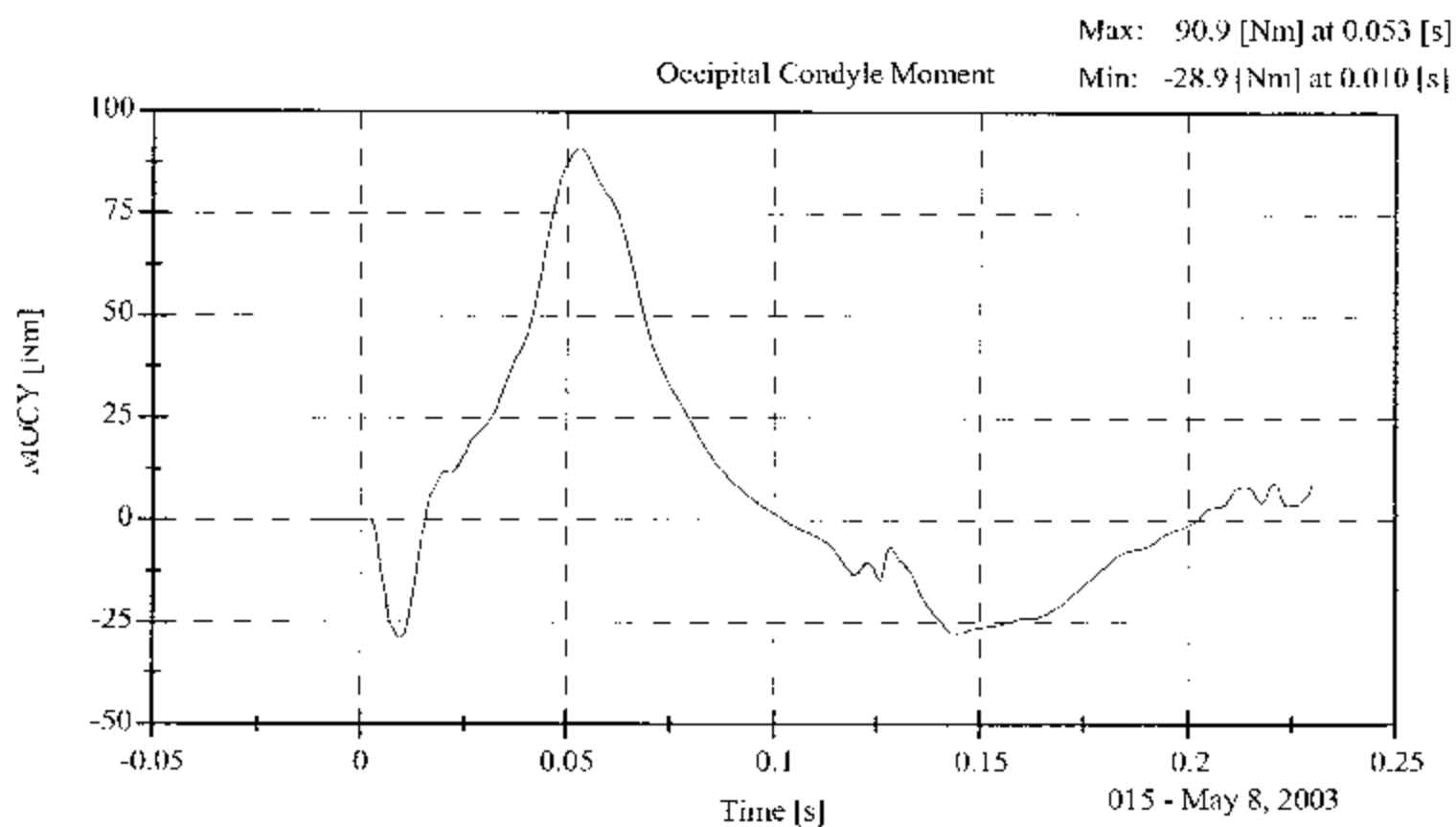
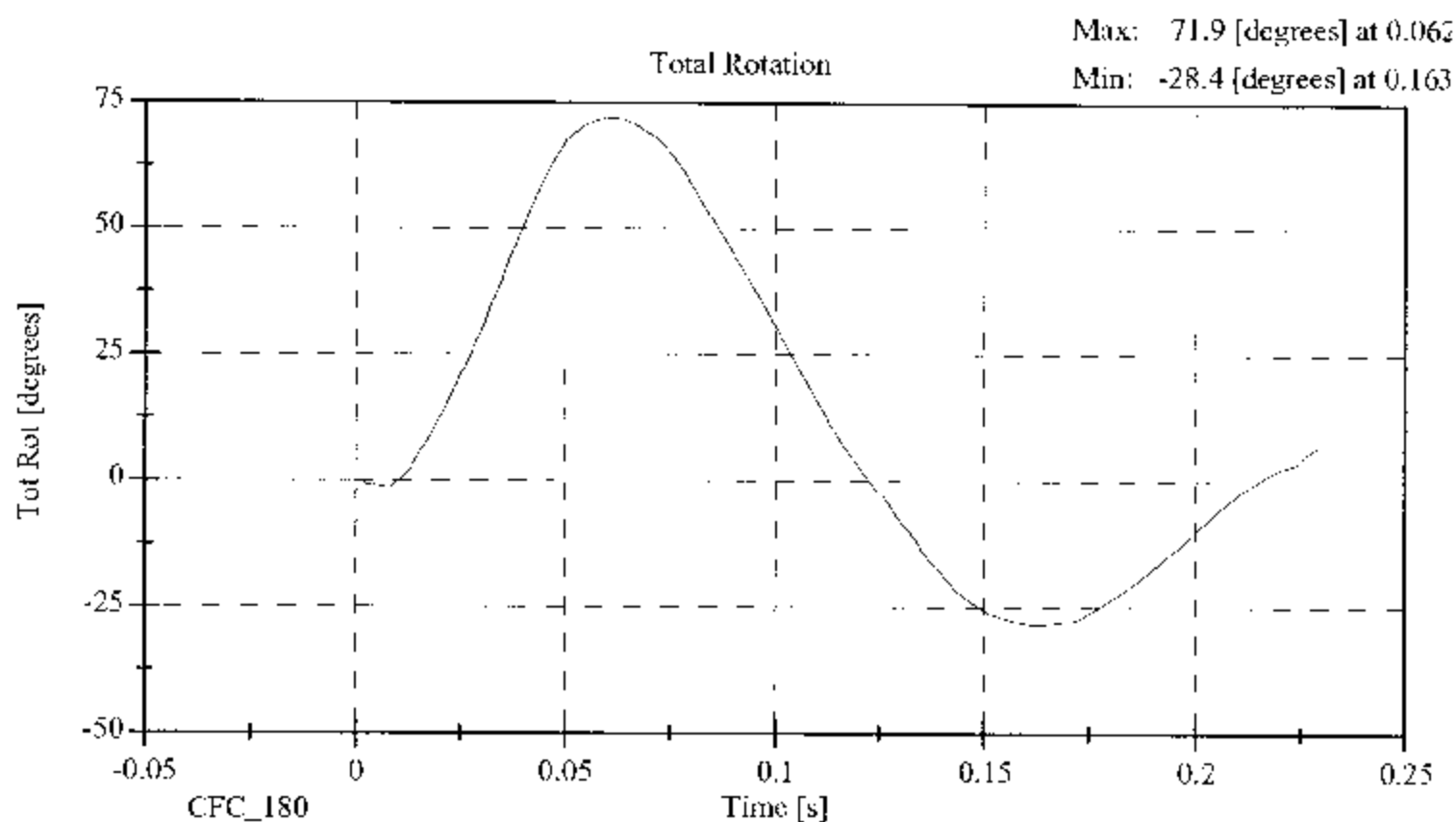
Neck Test



Neck Test



Neck Test



**ABDOMINAL COMPRESSION TEST
POST TEST**
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015

Sequential Test Number: 3

Date: May 17, 2003

Laboratory Technician: B. Swieczicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 13 mm (N)	104 - 162	113.4
FORCE @ 19 mm (N)	163 - 221	177.9
FORCE @ 25 mm (N)	222 - 280	258.9
FORCE @ 33 mm (N)	325 - 391	375.9

REMARKS: None

Dummy S/N 015

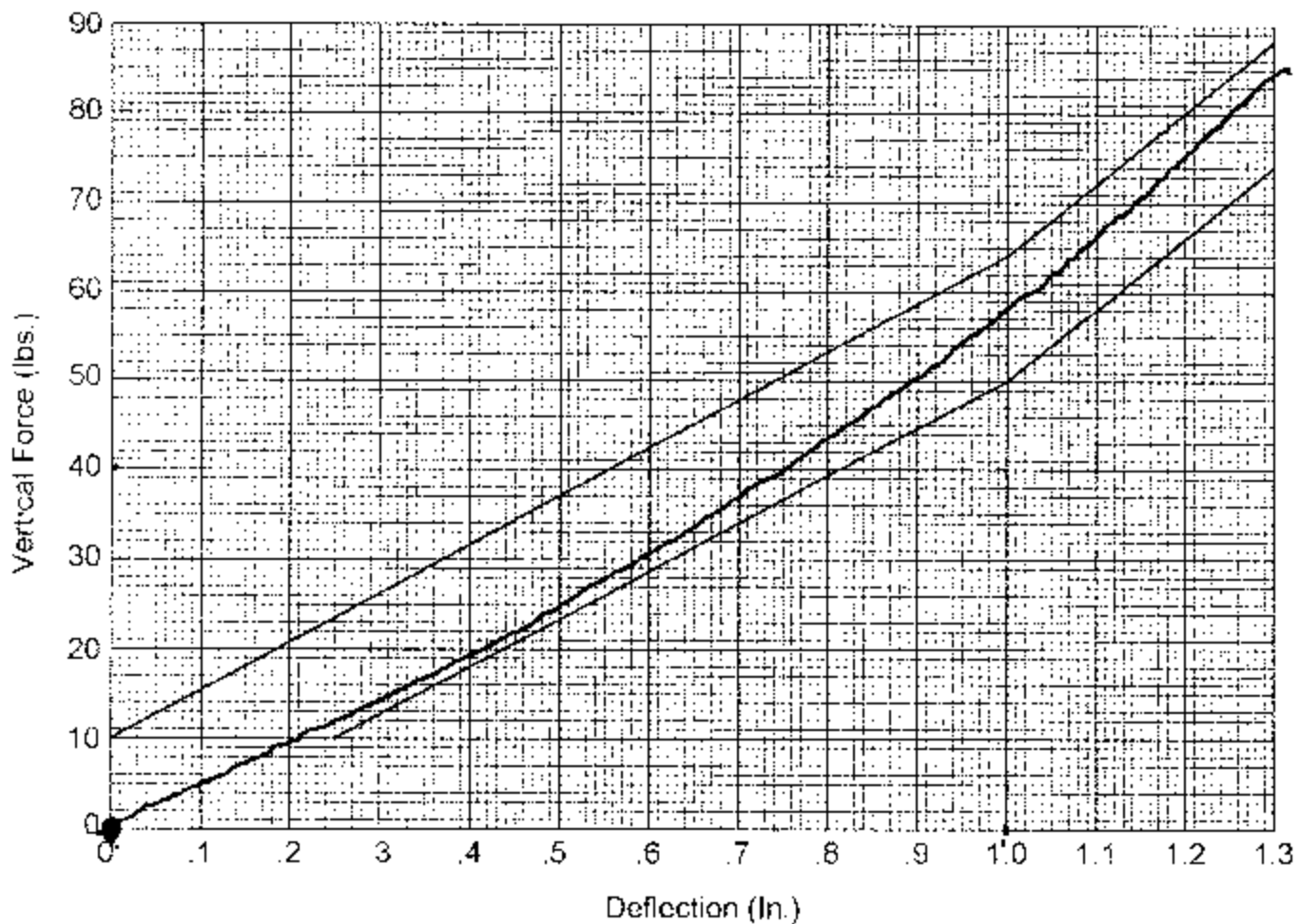
W/A _____

Date 5-9-03

Performed By [Signature]

Temp 70°

Humidity 39%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
(Test not required for SJD certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 015 Sequential Test Number: 3
Date: May 17, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.3 - 151.2	111.2
FORCE @ 30° (N)	151.2 - 204.6	169.0
FORCE @ 40° (N)	204.6 - 258	218.0
RETURN ANGLE	12° max.	3.2°

REMARKS: None

Dummy S/N

015

W/A

Date

5-2-03

Performed By

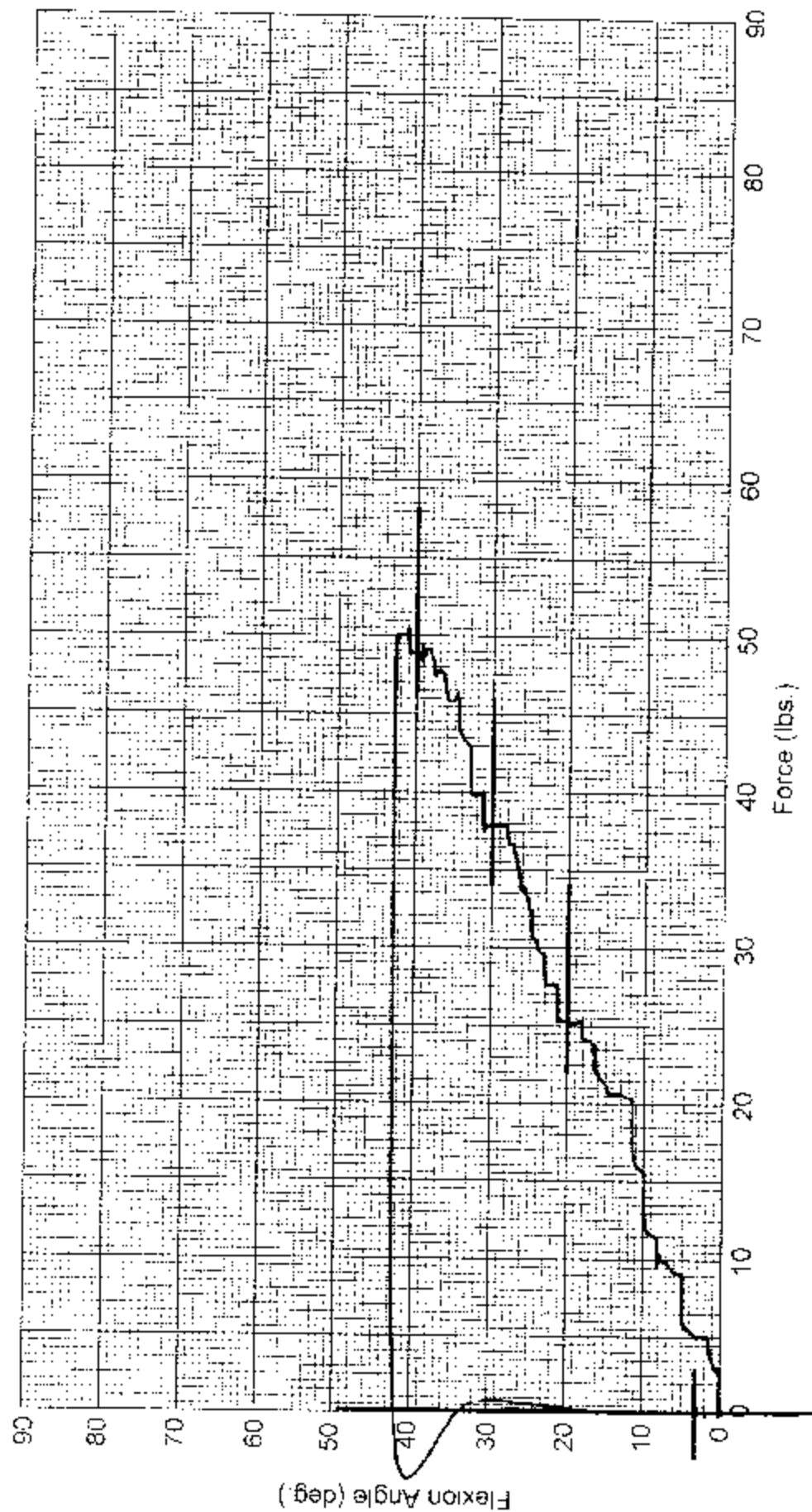
[Signature]

Temp.

70

Humidity

59%



Hybrid II Lumbar Spine Flexion Test

POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID II3 Serial No.: 015 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swieczki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WEIGHT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

POST TEST

SID H3 NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID 113 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	239
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	371

REMARKS: None

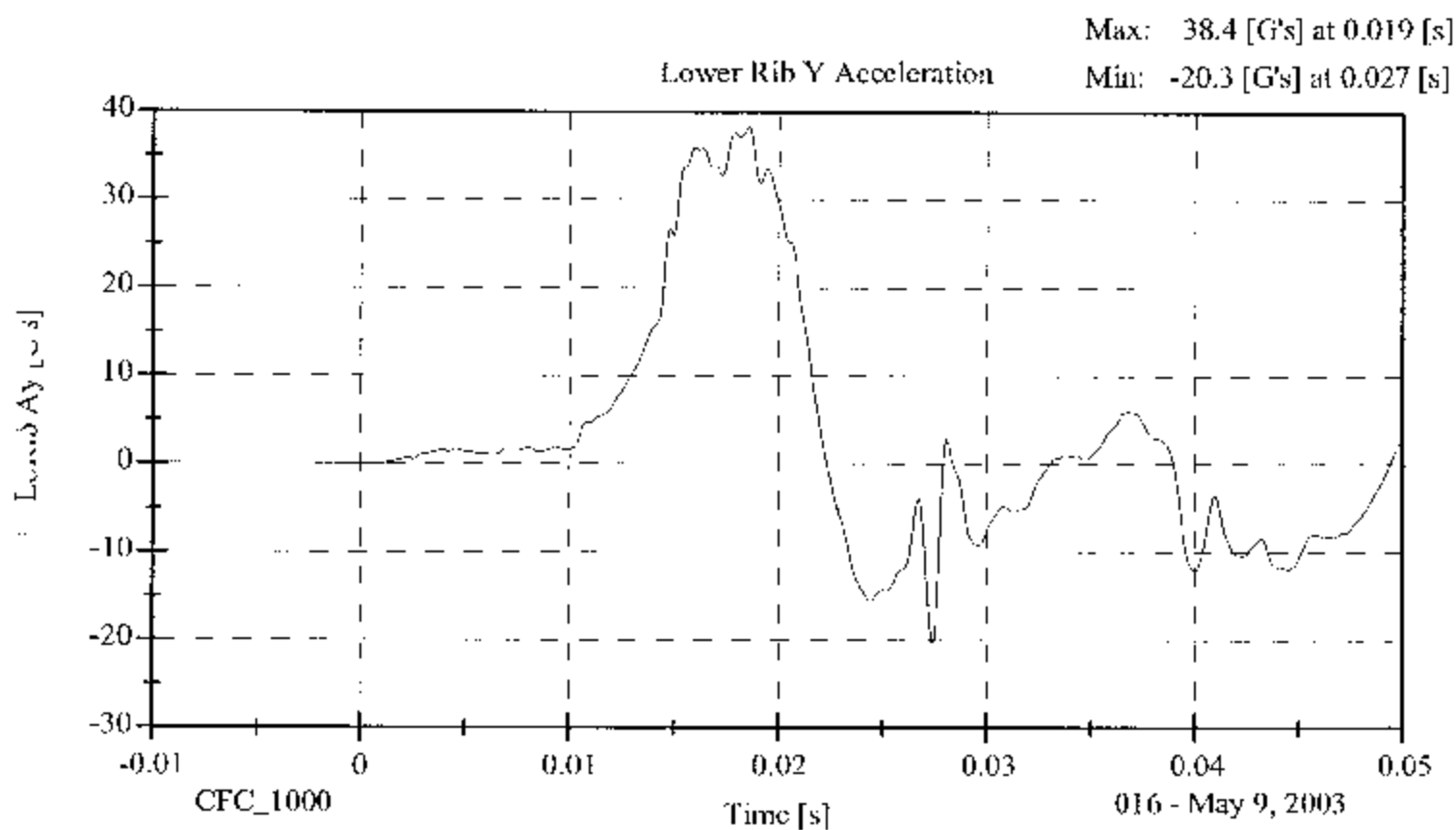
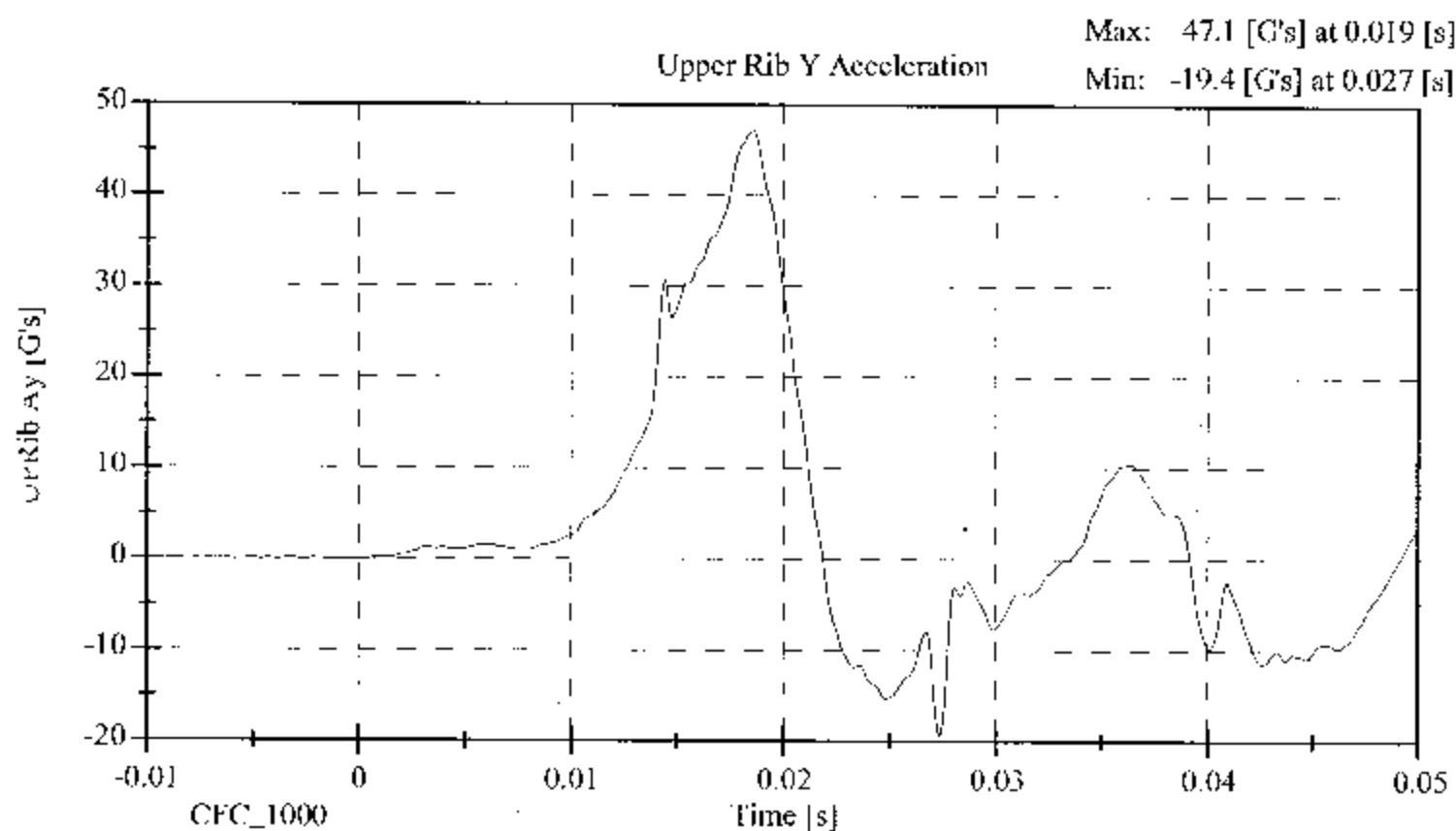
**LATERAL THORAX IMPACT TEST
POST TEST**

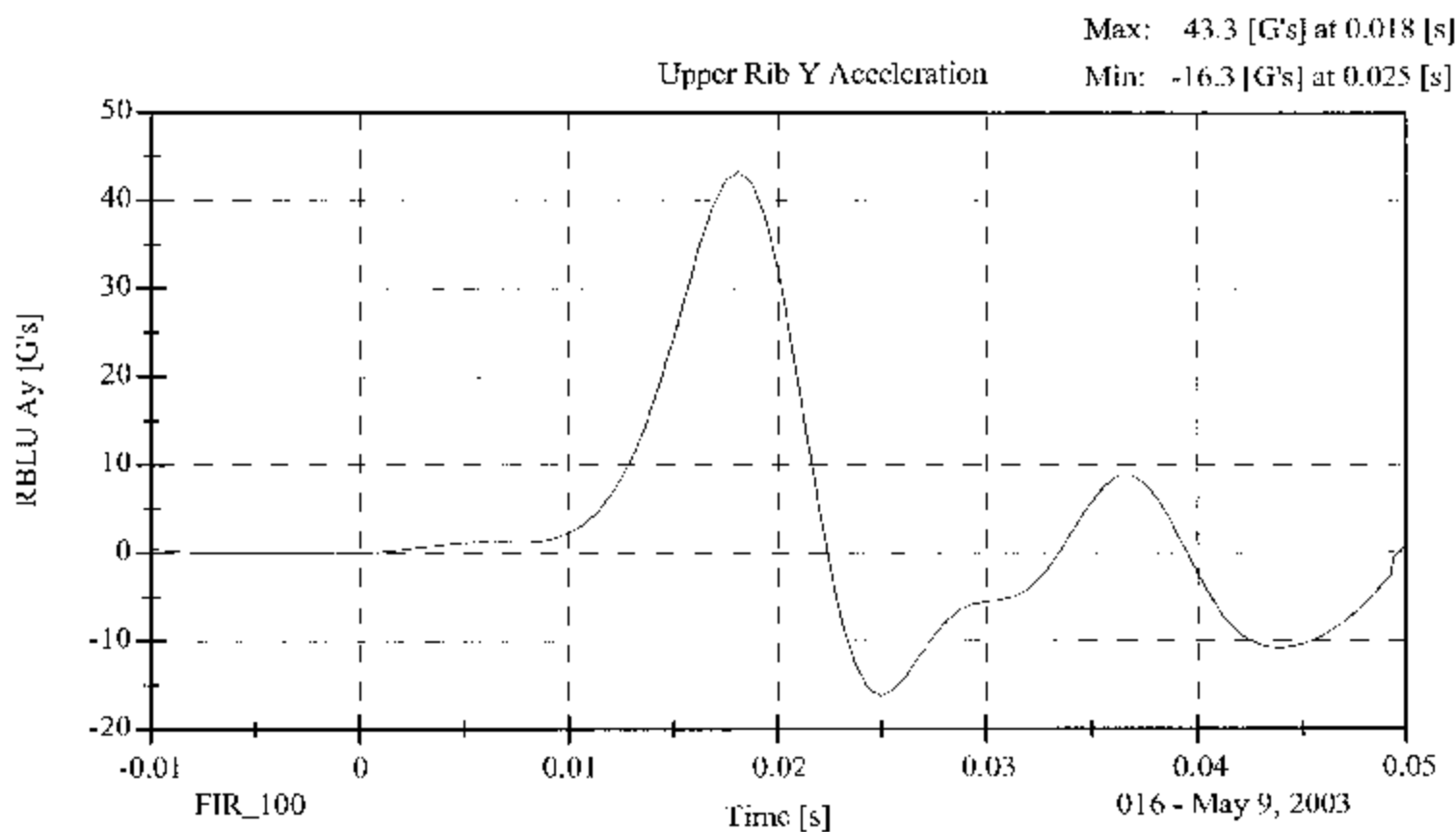
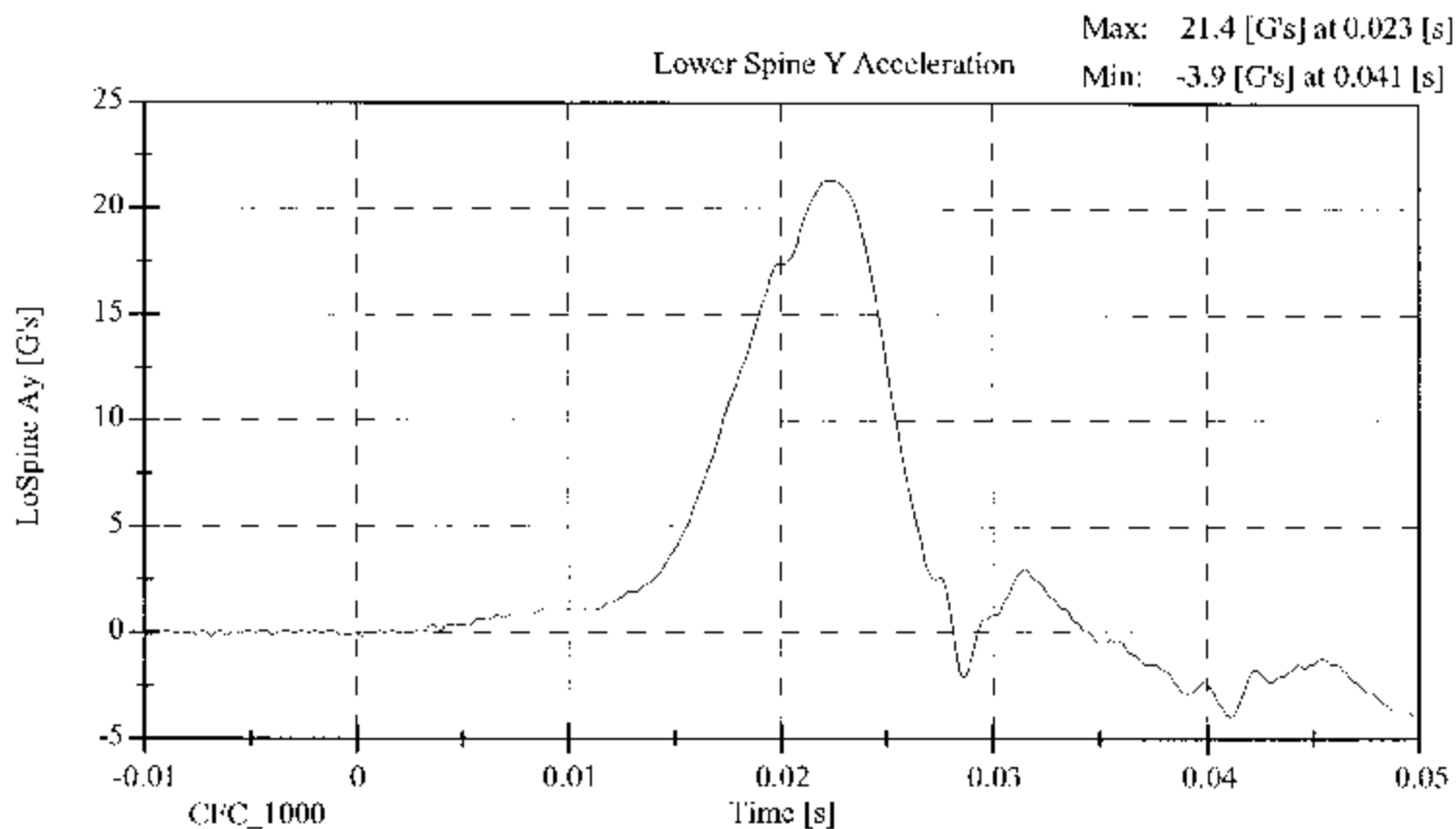
CONFIGURED FOR LEFT SIDE IMPACT

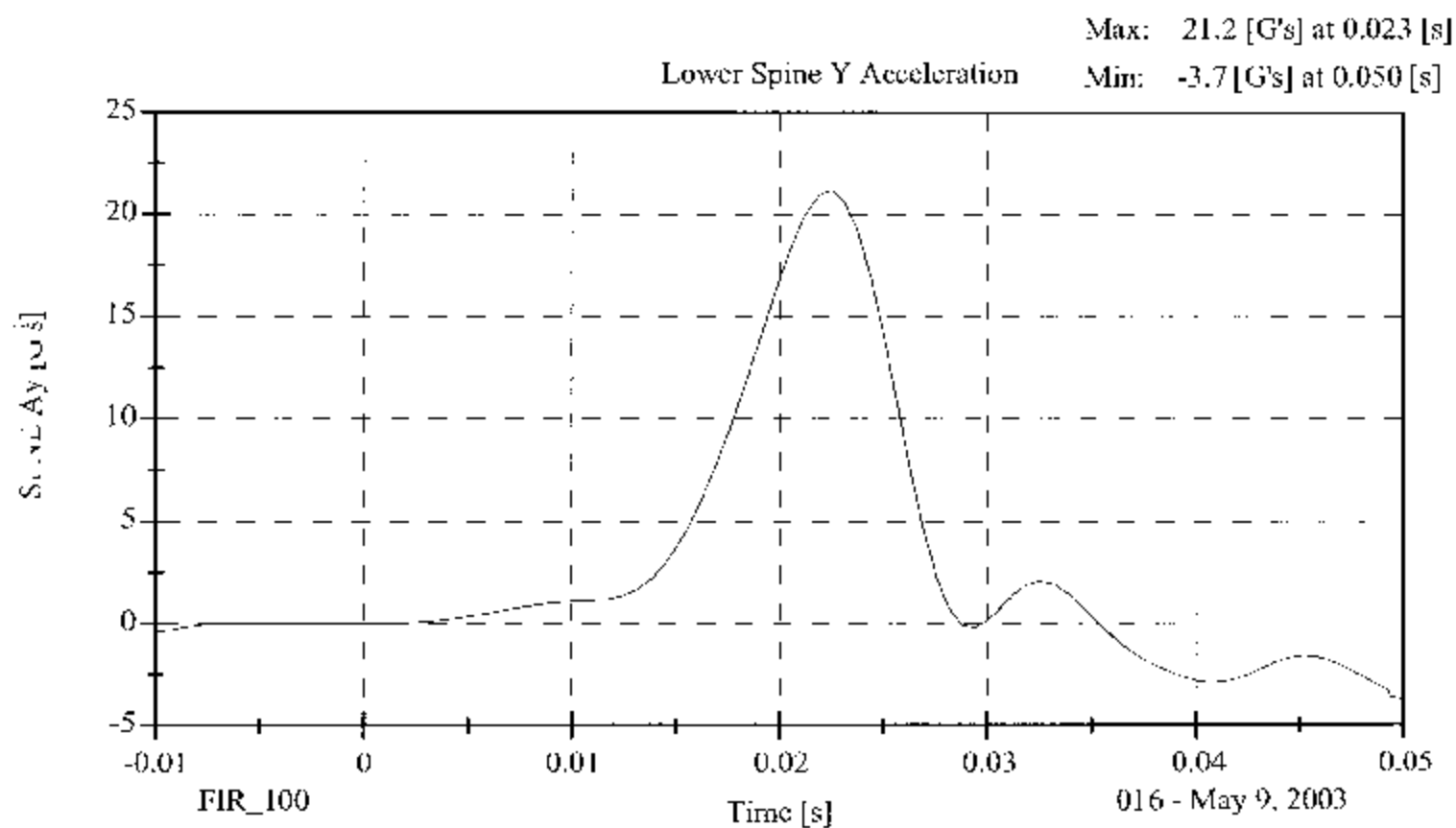
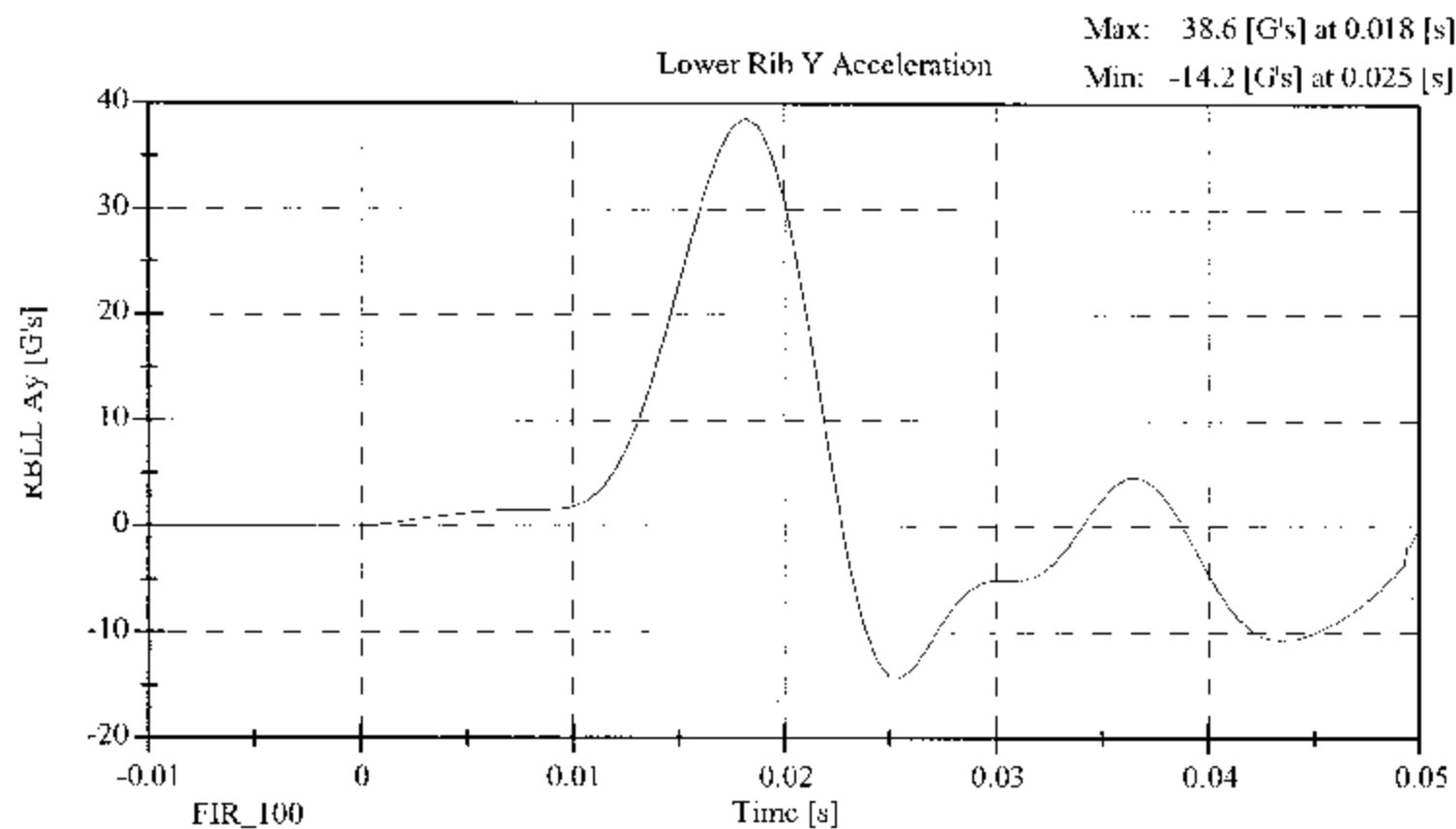
SID H3 Serial No.: 016	Sequential Test Number: 3
Date: May 9, 2003	Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28
UPPER RIB (g's)	37 - 46	43.28
LOWER RIB (g's)	37 - 46	38.62
LOWER SPINE (g's)	15 - 22	21.20

REMARKS: None







**LATERAL PELVIS IMPACT TEST
POST TEST**

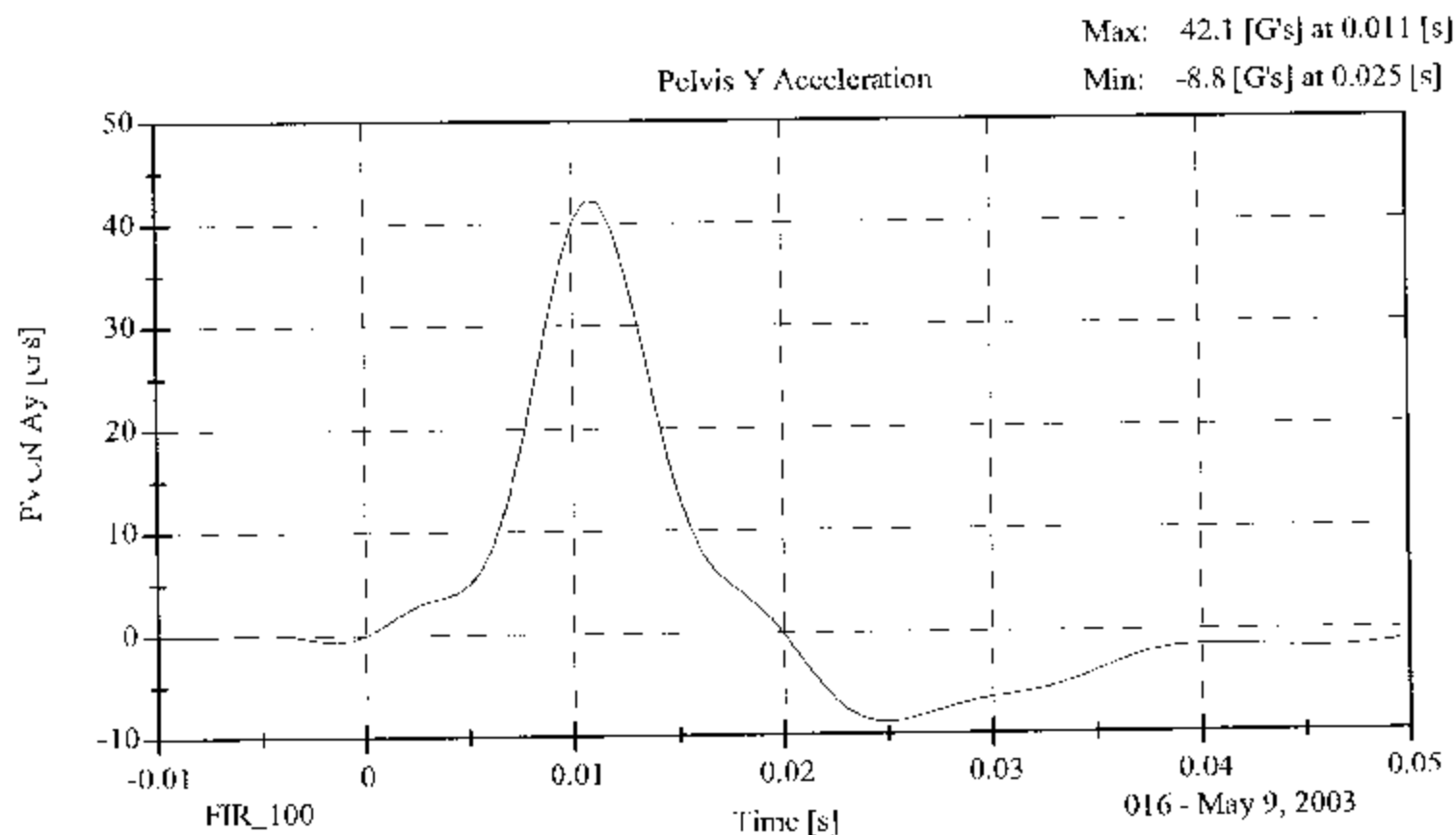
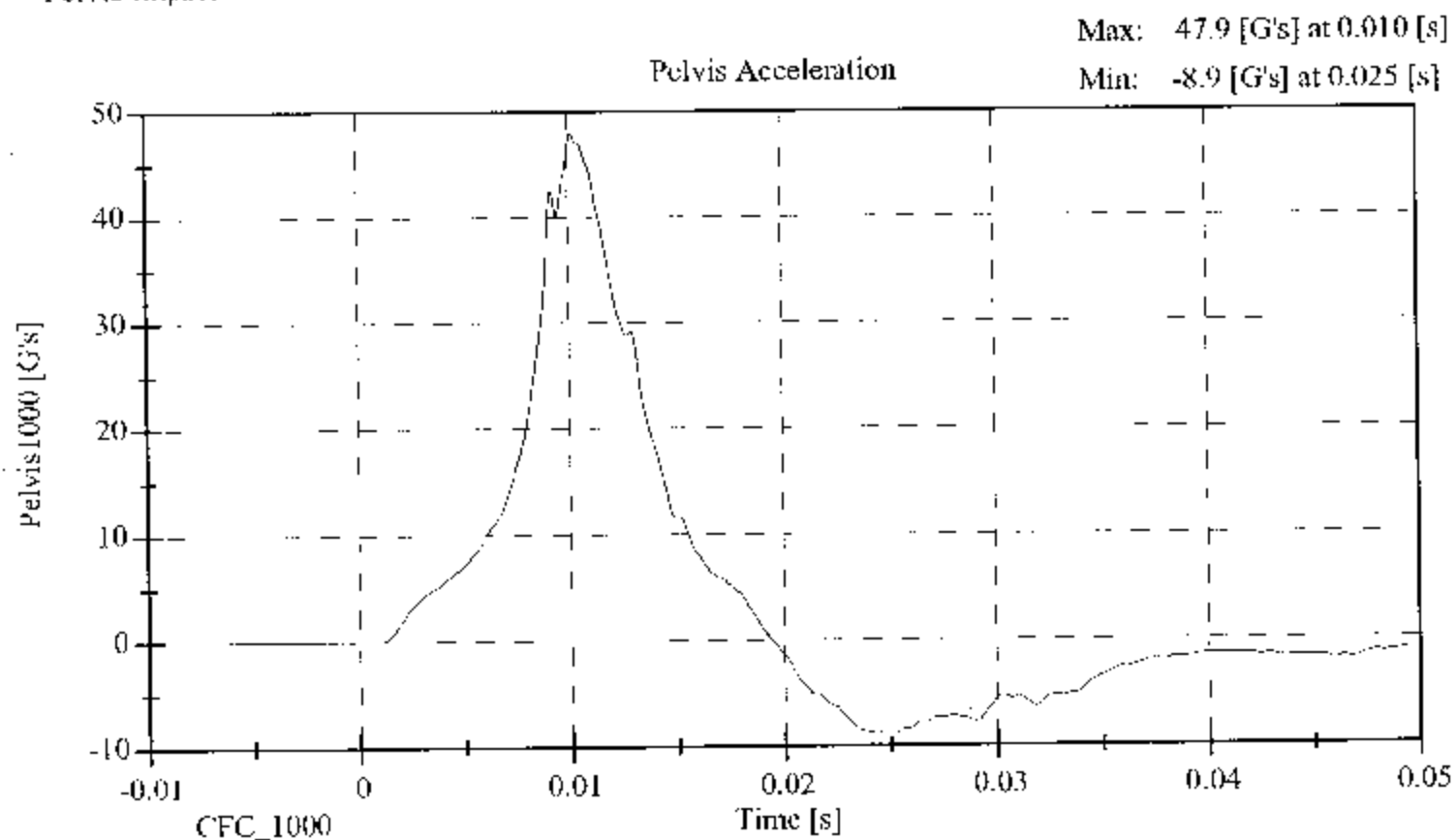
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.27
PELVIS ACCELERATION (g's)	40 - 60	42.12

REMARKS: None

Pelvic Impact



HEAD DROP TEST
POST-TEST
(Test not required for SID certification)

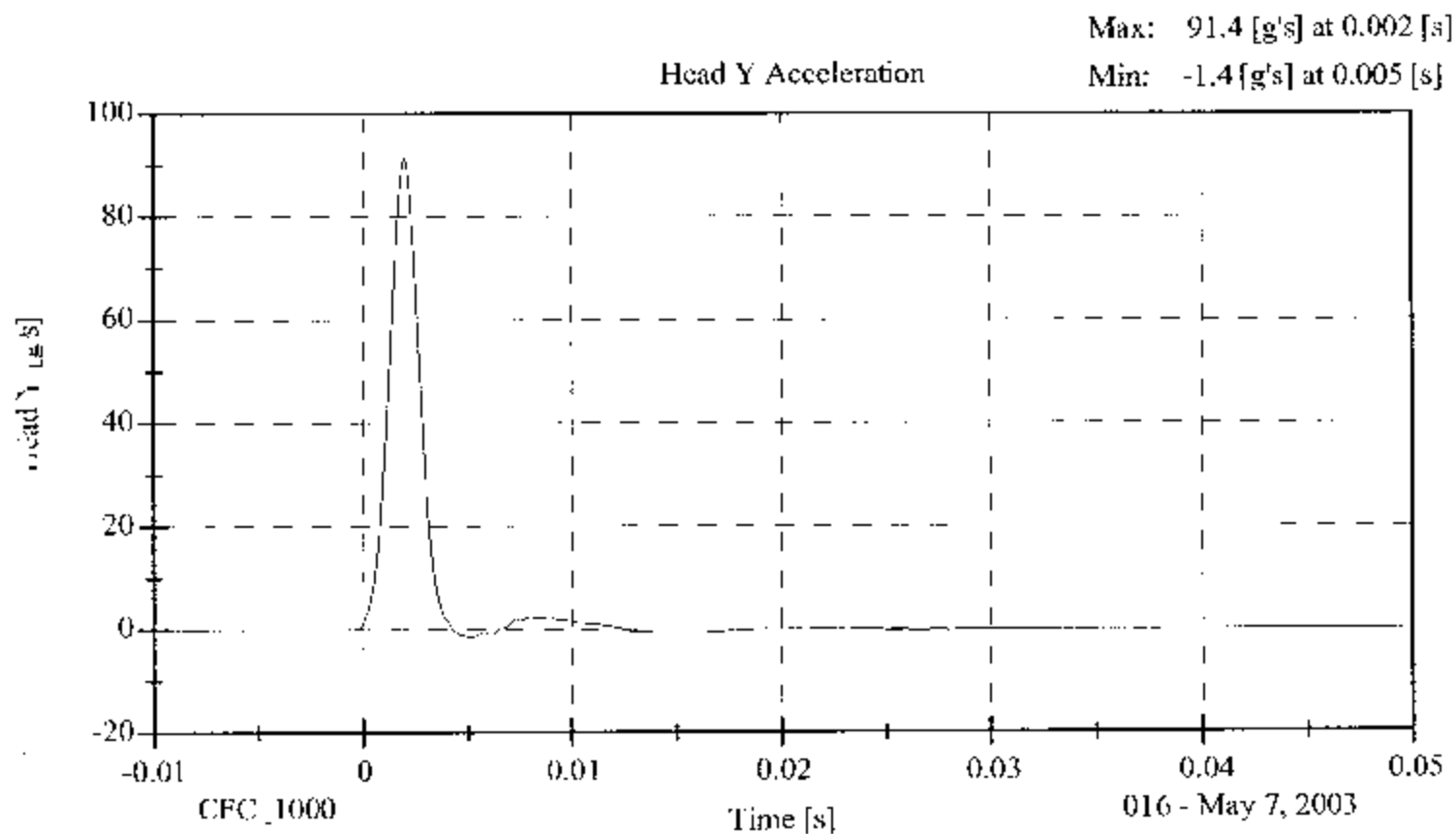
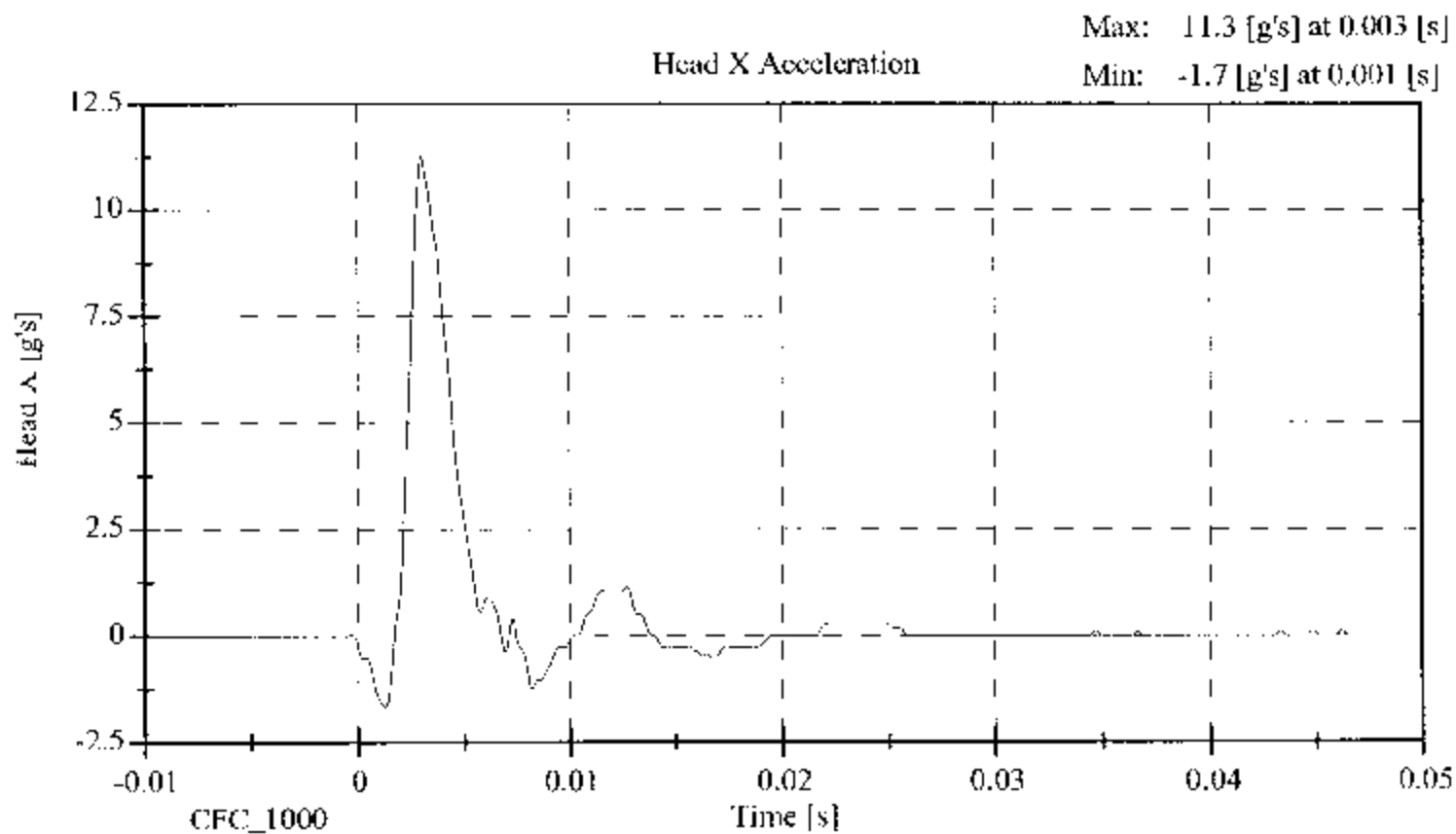
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 3
Date: May 7, 2003 Laboratory Technician: B. Swiecicki

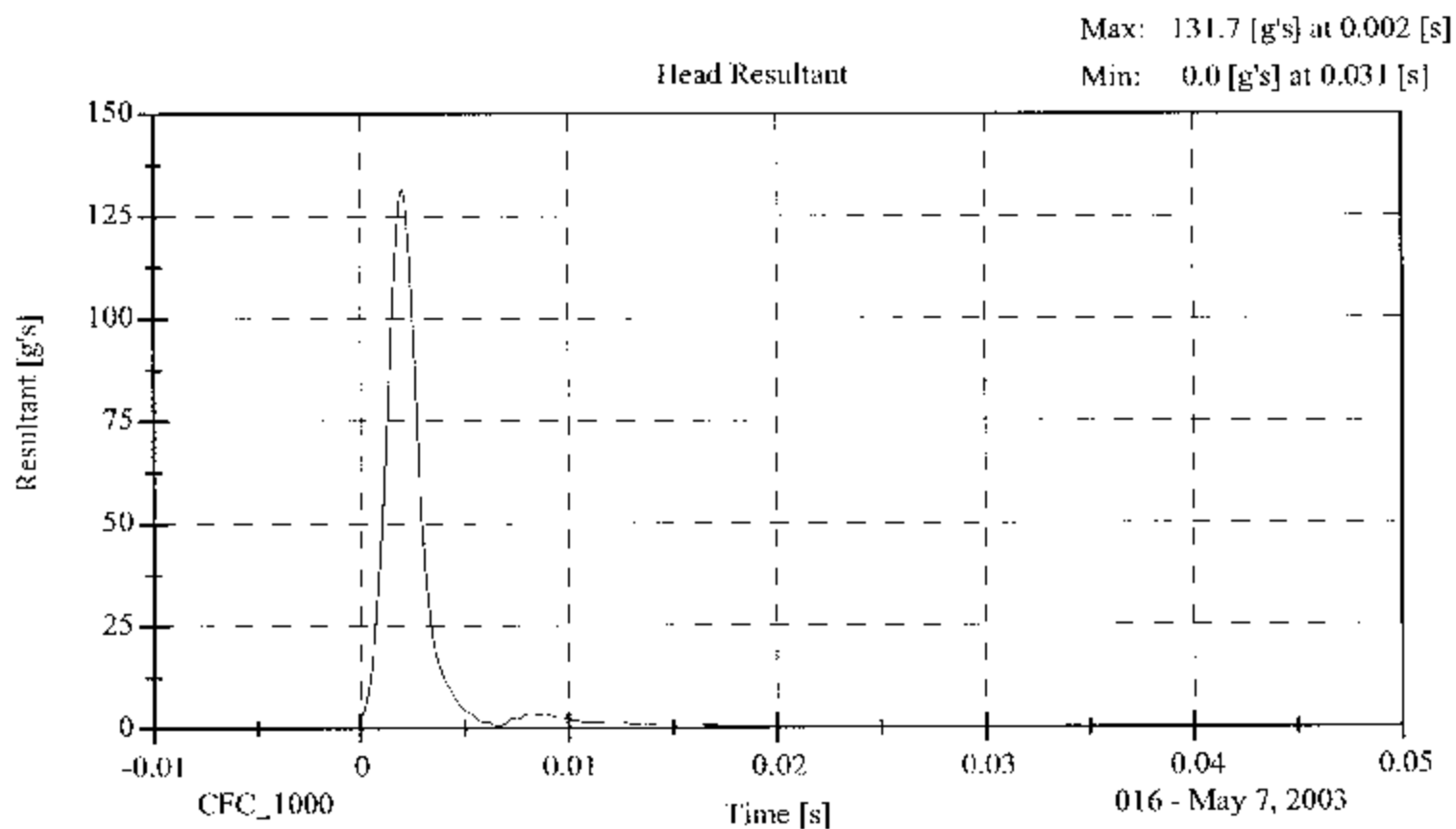
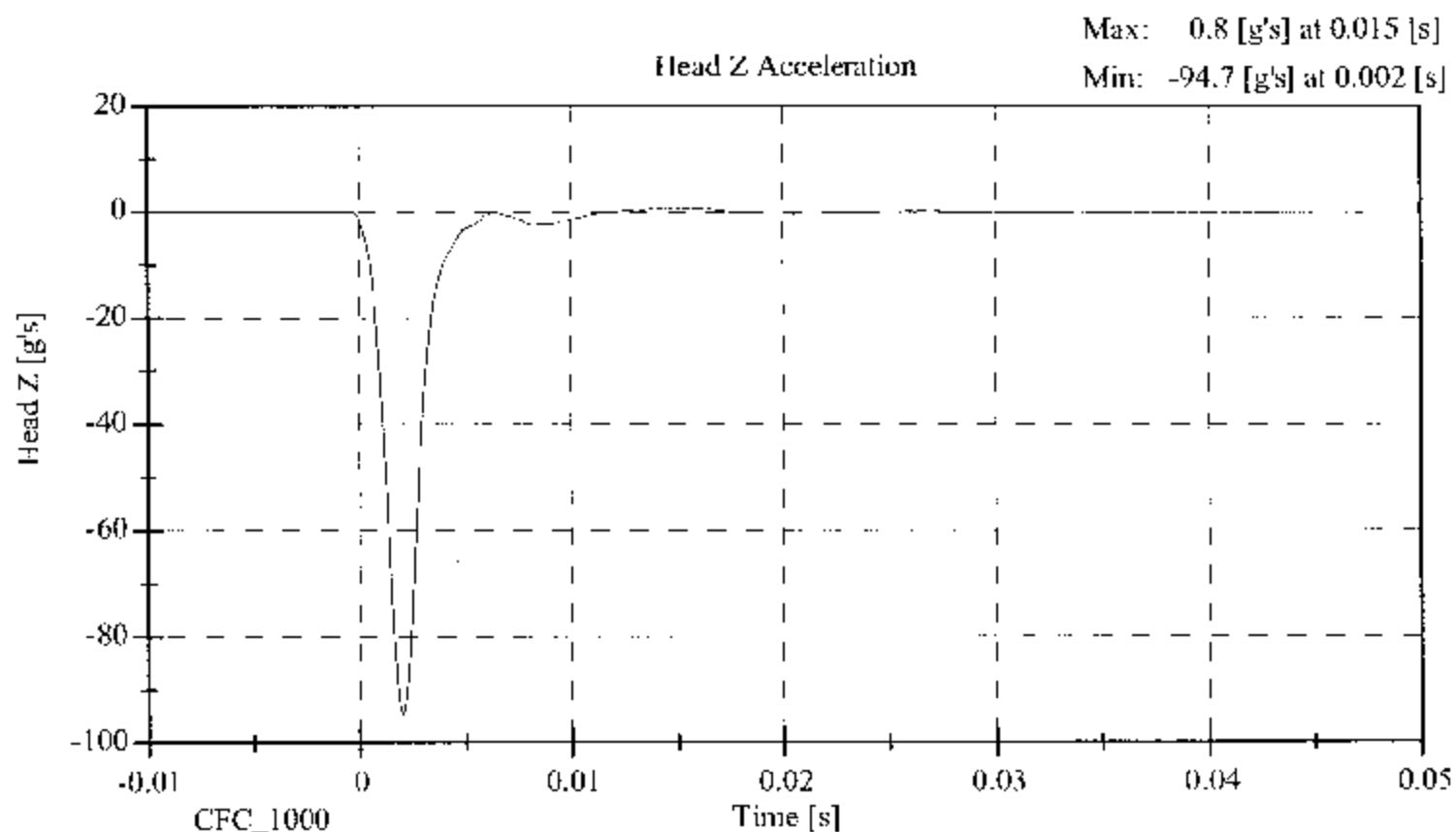
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 – 22.2	21.1
RELATIVE HUMIDITY (%)	10 – 70	33.00
PEAK RESULTANT ACCELERATION (Gs)	120 – 150	131.66
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	11.27
CURVE PERCENT NONMODAL (%)	< 15	2.67

REMARKS: None

Head Drop



Head Drop



**LATERAL NECK BENDING TEST
POST-TEST**

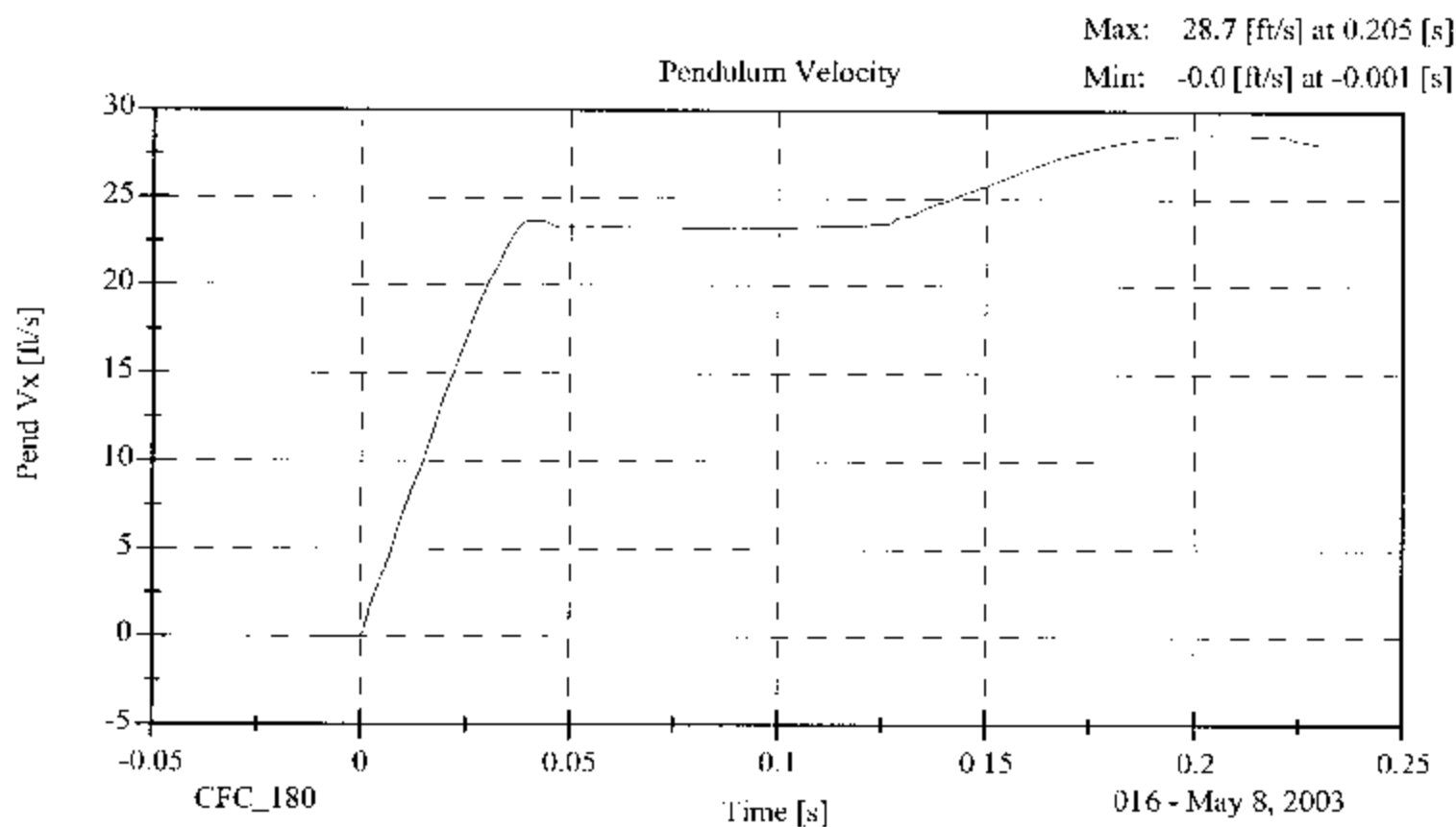
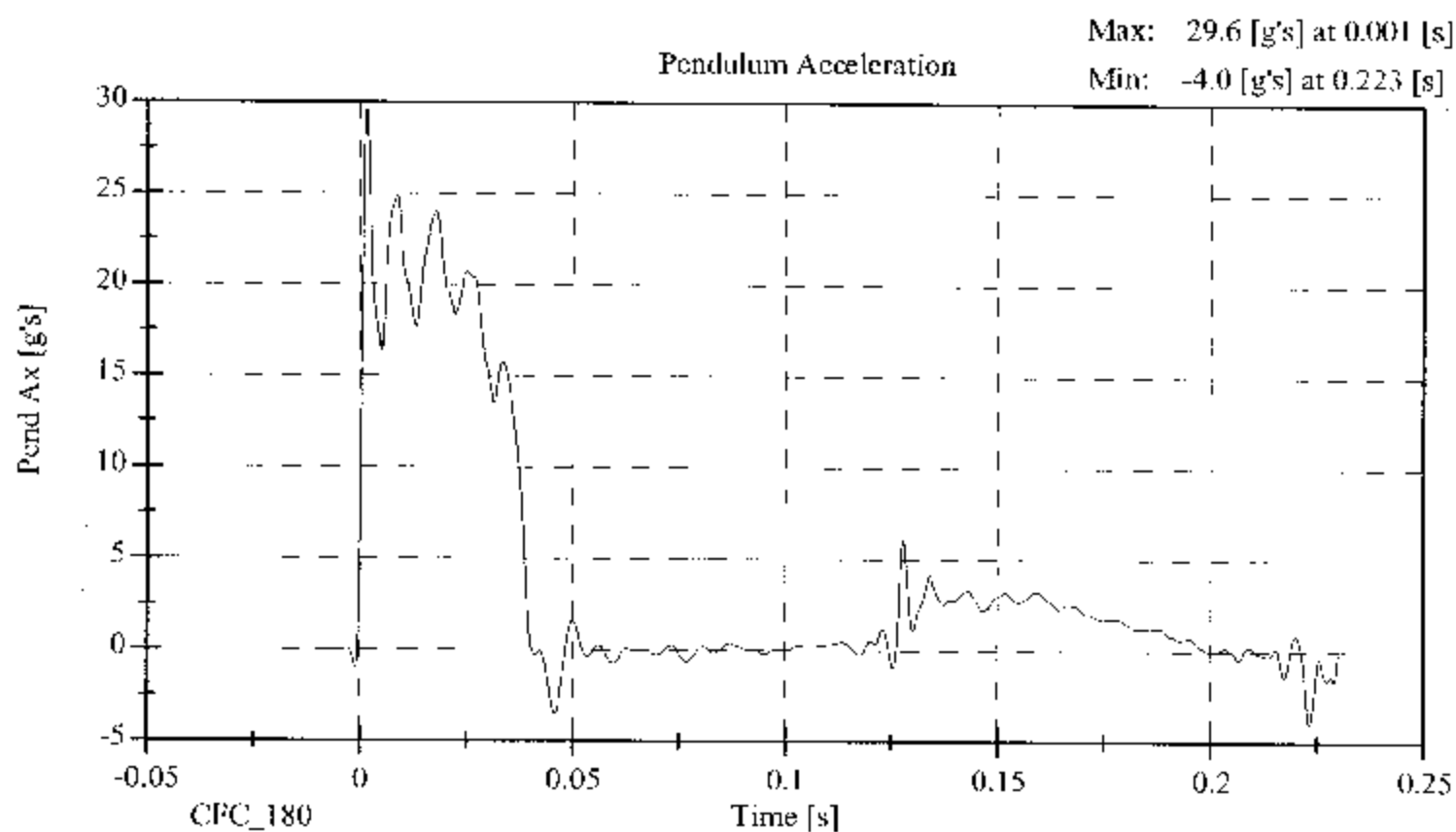
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

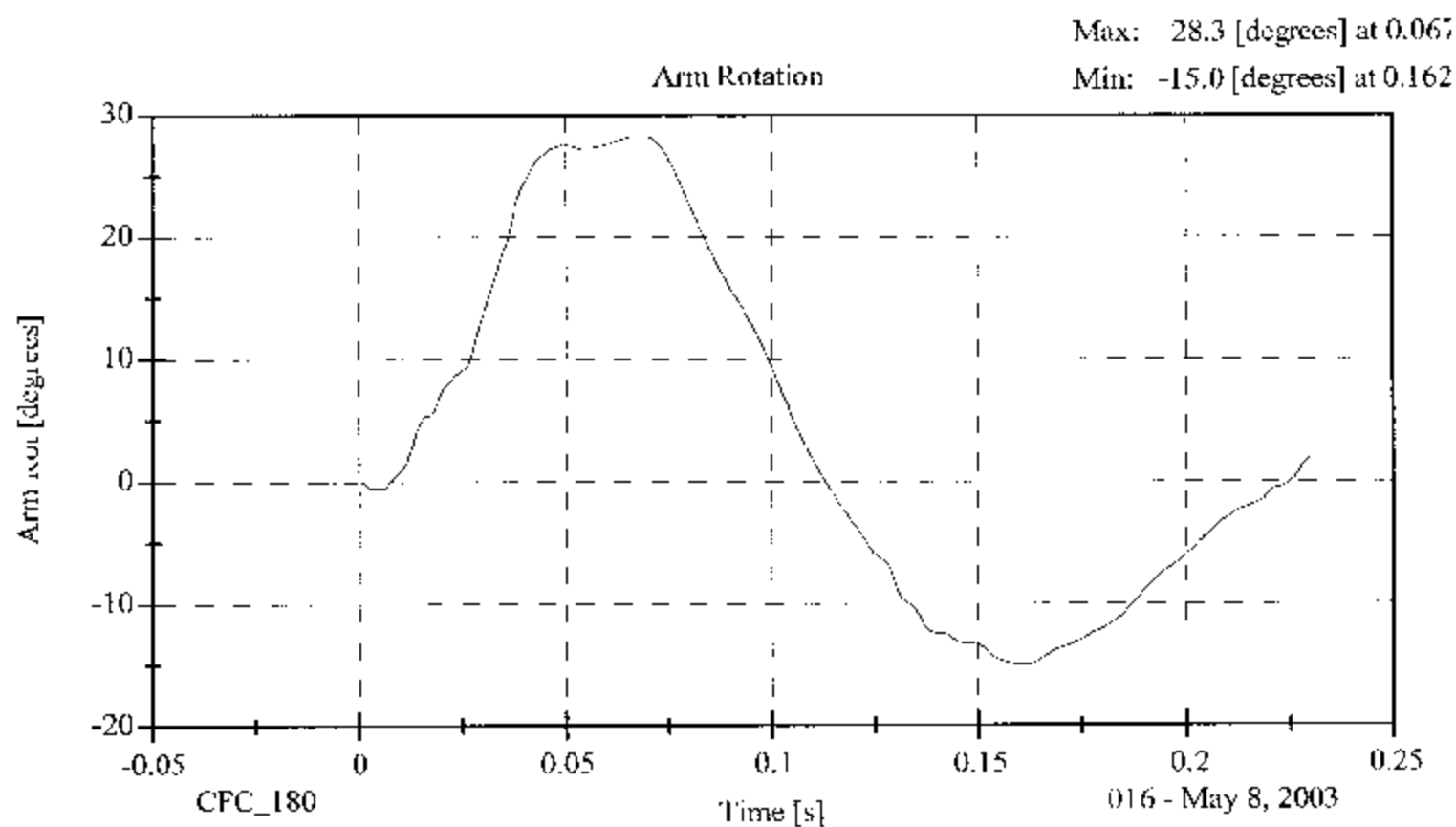
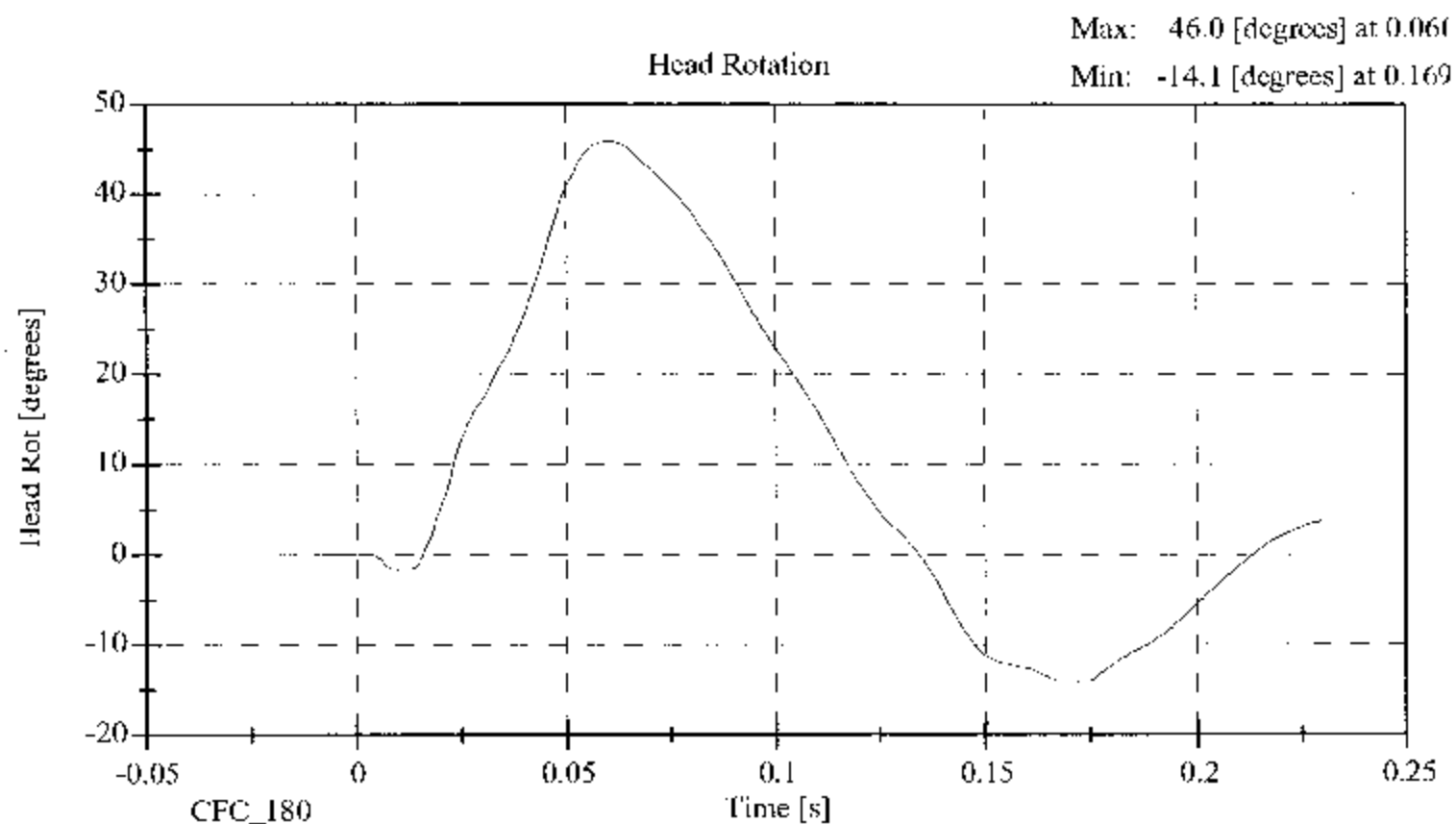
SID Serial No.: 016	Sequential Test Number: 3	
Date: May 8, 2003	Laboratory Technician: B. Swiecicki	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	33.0
IMPACT VELOCITY (m/s)	6.89 - 7.13	6.90
PENDULUM DELTA V		
DELTA V @ 10 ms (m/s)	1.96 - 2.55	2.14
DELTA V @ 20 ms (m/s)	4.12 - 5.10	4.20
DELTA V @ 30 ms (m/s)	5.73 - 7.01	6.07
DELTA V @ 40-70 ms (m/s)	6.27 - 7.64	7.21
D PLANE ROTATION		
MAXIMUM ROTATION (deg)	64 - 78	73.66
ROT. ANGLE TIME to ZERO (ms)	50 - 70	61.50
MOMENT ABOUT THE OCCIPITAL CONDYLE		
MAX OCCIPITAL MOMENT (Nm)	88 - 108	88.14
OCCIPITAL MOMENT DECAY (ms)	40.0 - 60.0	52.10
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT		
ROTATION wrt MOMENT (ms)	0 - 20	10.10

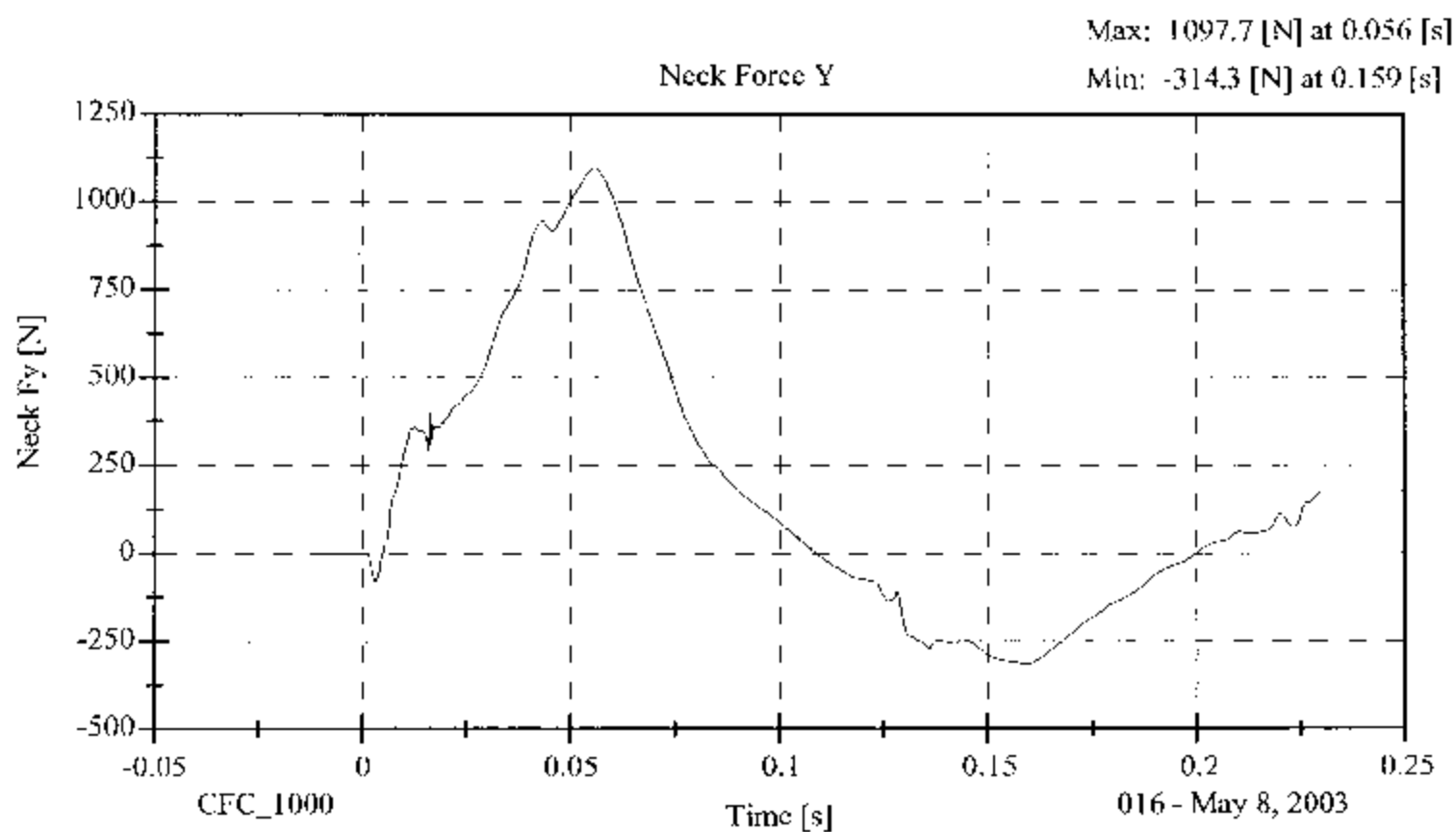
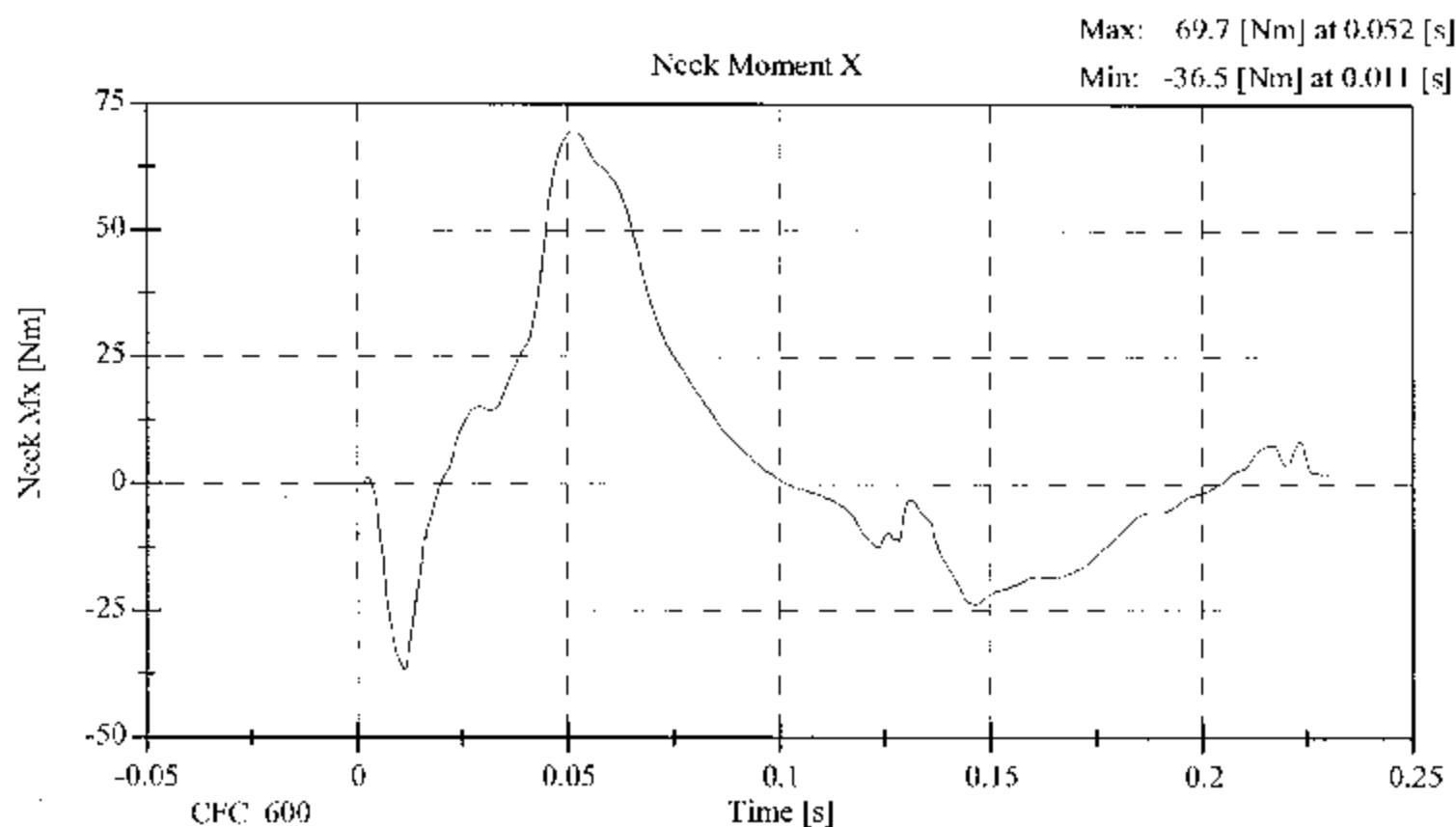
REMARKS: None



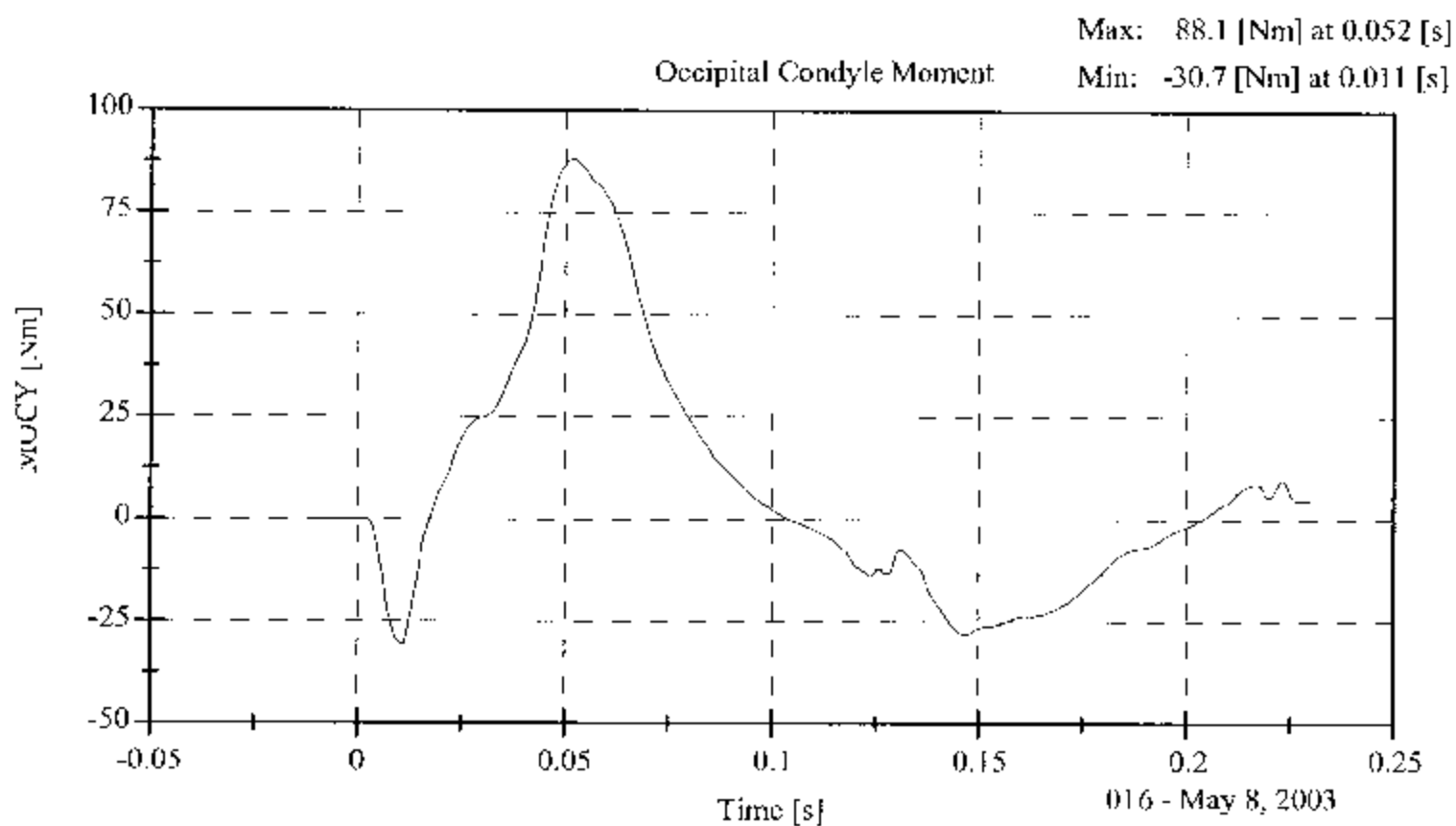
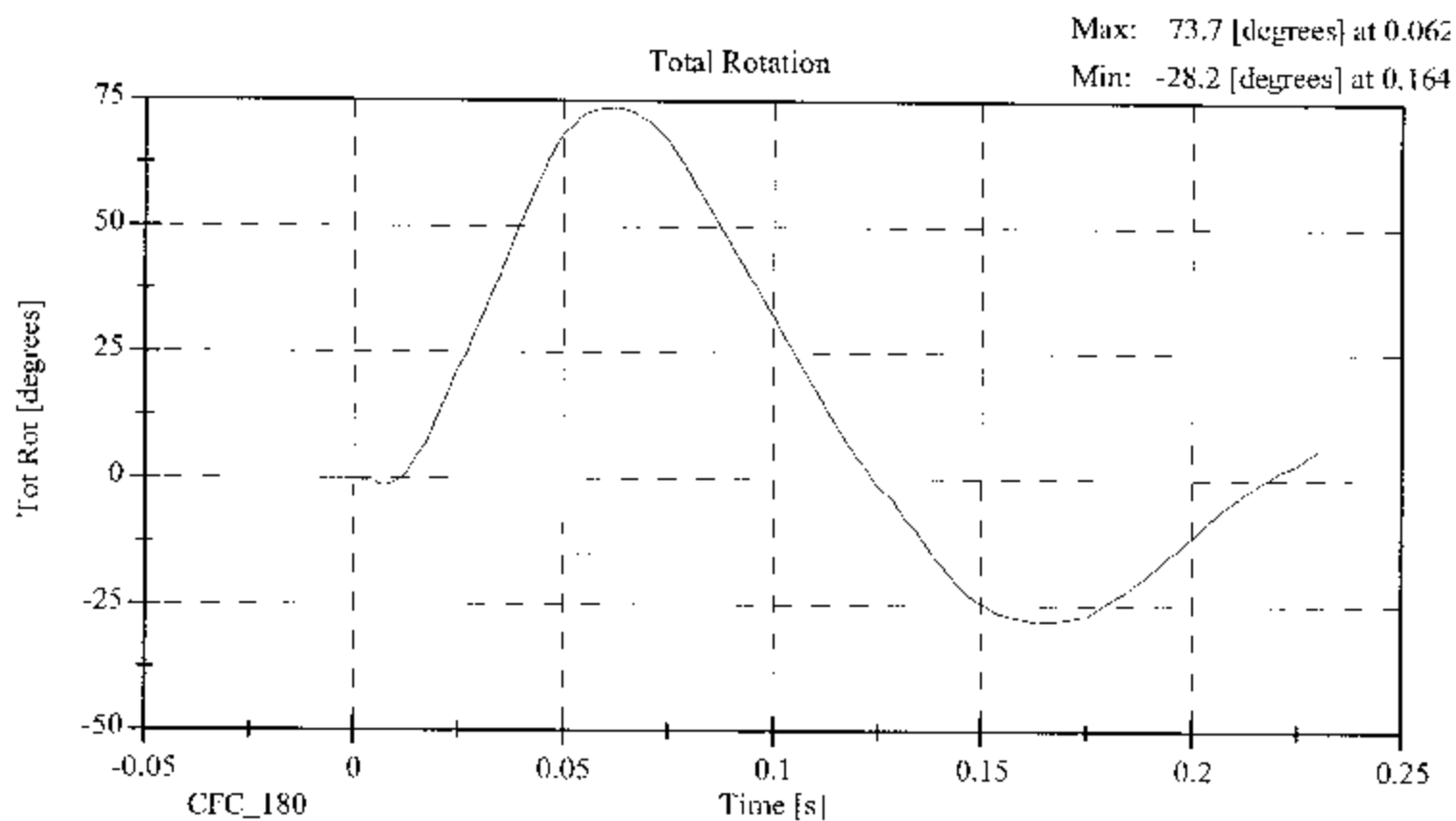
Neck Test



Neck Test



Neck Test



**ABDOMINAL COMPRESSION TEST
POST TEST**
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 13 mm (N)	104 - 162	111.2
FORCE @ 19 mm (N)	163 - 221	175.7
FORCE @ 25 mm (N)	222 - 280	258.0
FORCE @ 33 mm (N)	325 - 391	373.7

REMARKS: None

Dummy S/N 016

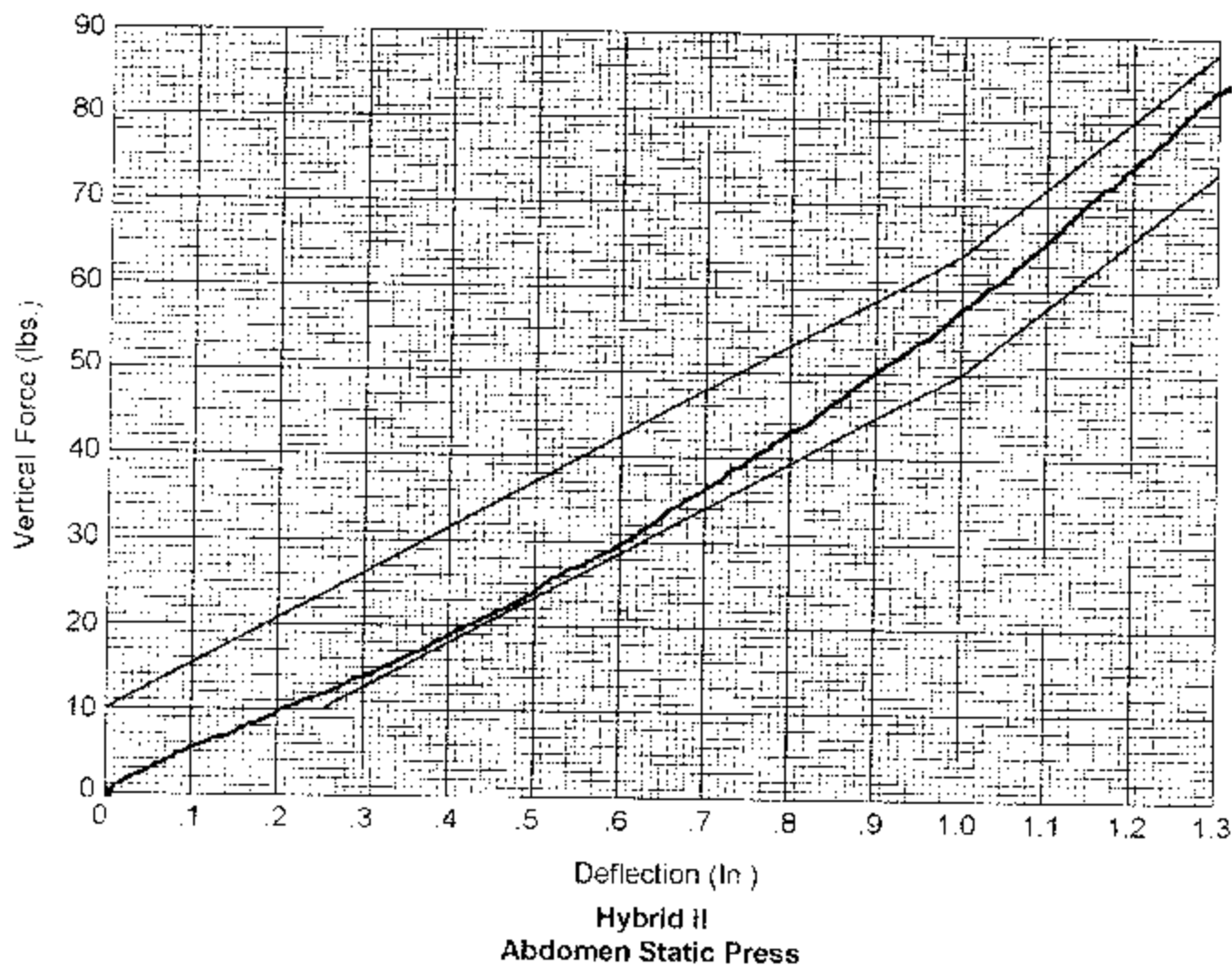
W/A _____

Date 5-9-03

Performed By [Signature]

Temp. 70°

Humidity 39%



LUMBAR FLEXION TEST
POST TEST
 (Test not required for SHD certification)

CONFIGURED FOR LEFT SIDE IMPACT

SHD H3 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	39.0
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	116.8
FORCE @ 30° (N)	151.2 - 204.6	166.8
FORCE @ 40° (N)	204.6 - 258	220.2
RETURN ANGLE	12° max.	3.5°

REMARKS: None

Dummy S/N

016

W/A

Date

5-9-03

Performed By

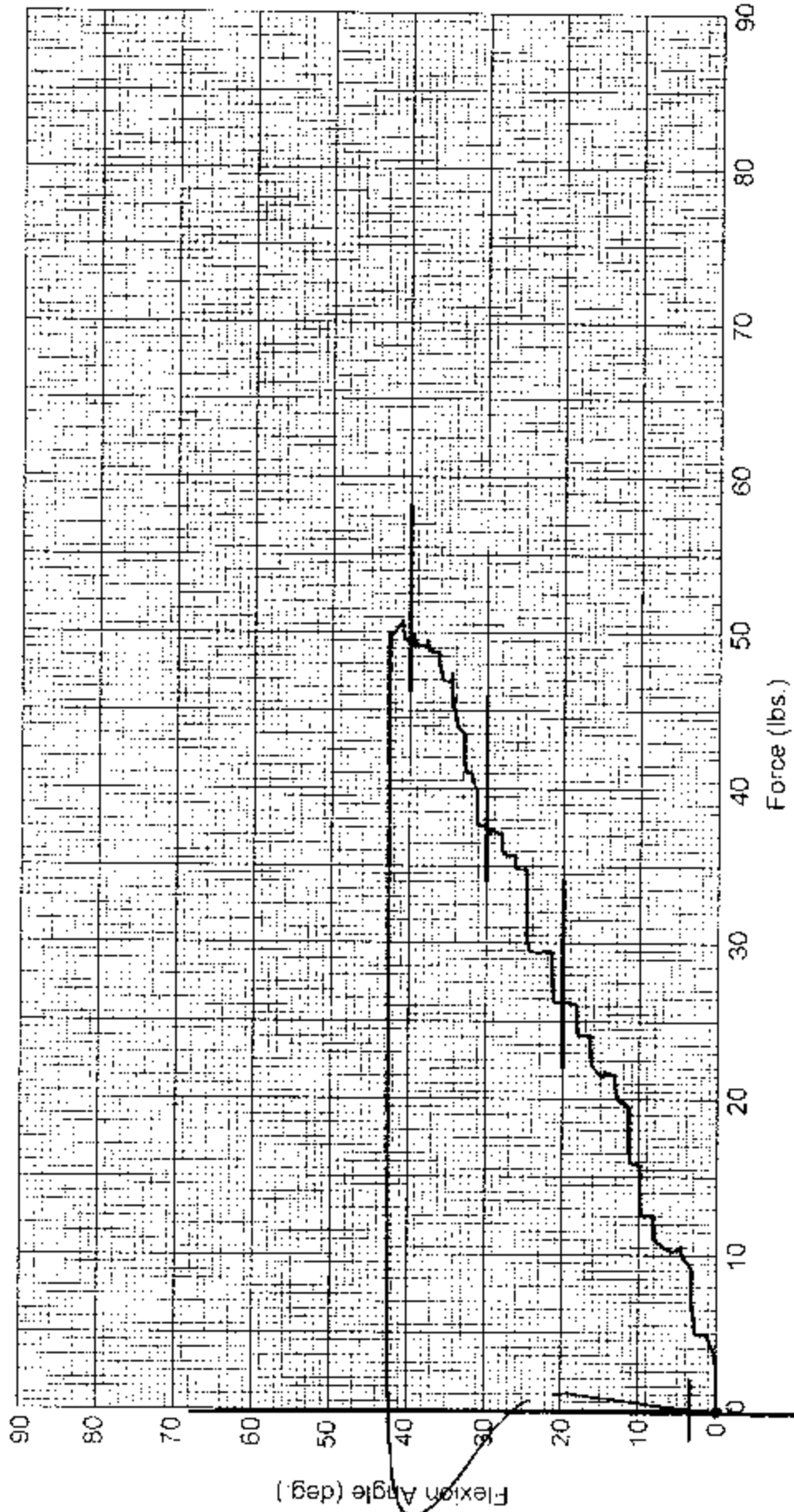
[Signature]

Temp.

74°

Humidity

39%



Hybrid II Lumbar Spine Flexion Test

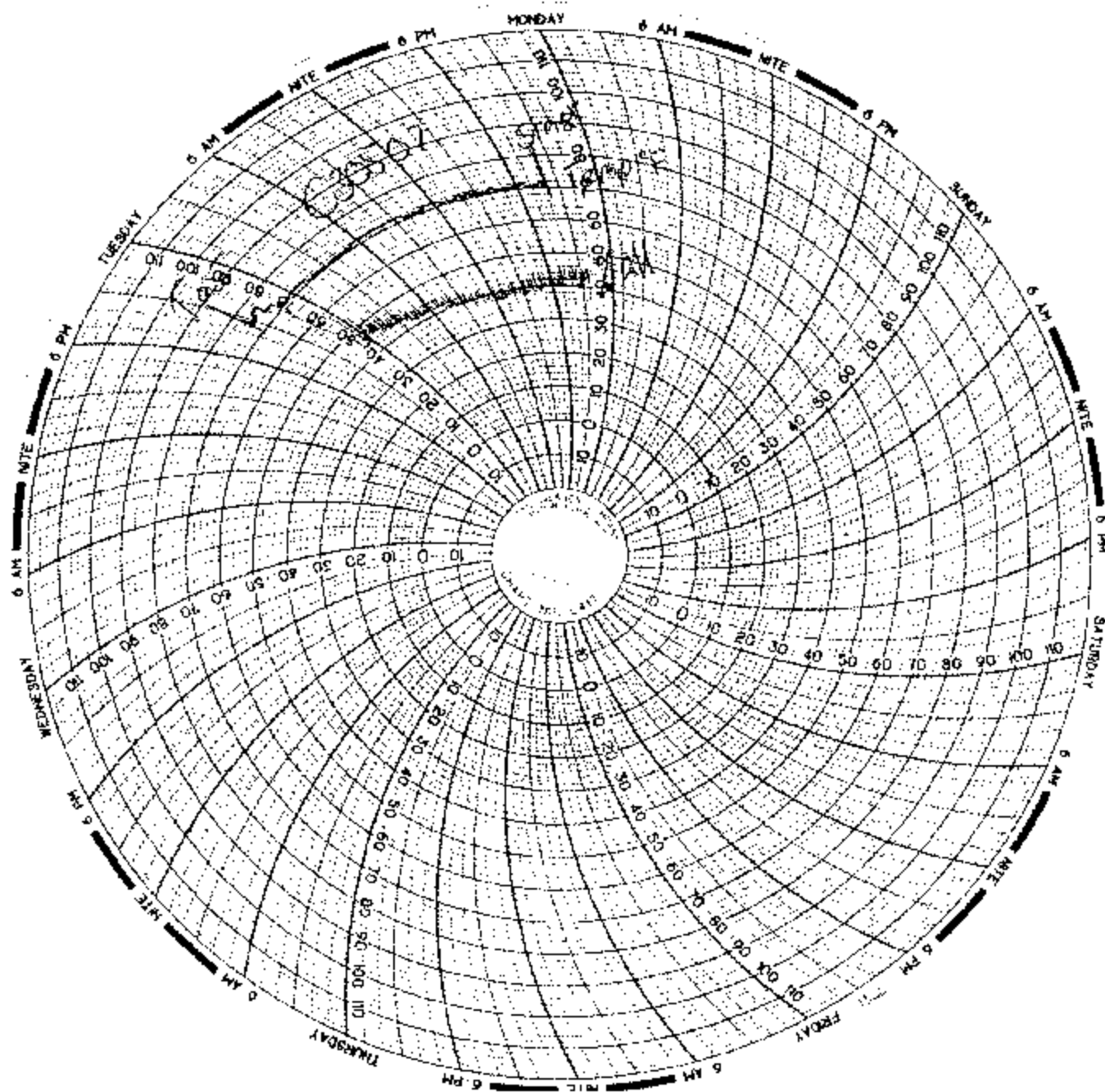
POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 016 Sequential Test Number: 3
 Date: May 9, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

TEMPERATURE TRACE



APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION
SID INSTRUMENTATION

FRONT SID NO.: 015			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
NAAH HEAD X ARM Y	AC-01G18-F06	ENTRAN	07-Apr-03
NAAH HEAD X ARM Z	AC-01B00113-F39	ENTRAN	07-Apr-03
NAAH HEAD Y ARM X	AC-00L113-F14	ENTRAN	07-Apr-03
NAAH HEAD Y ARM Z	AC-01G18-F16	ENTRAN	07-Apr-03
NAAH HEAD Z ARM X	AC-01B00L13-F72	ENTRAN	07-Apr-03
NAAH HEAD Z ARM Y	AC-01G18-F12	ENTRAN	07-Apr-03
HEAD AX	AC-P23993	ENDEVCO	04-Dec-02
HEAD AY	AC-P23939	ENDEVCO	04-Dec-02
HEAD AZ	AC-P23999	ENDEVCO	04-Dec-02
UPPER NECK FX	LC-260Fx	DENTON	12-Dec-02
UPPER NECK FY	LC-260Fy	DENTON	12-Dec-02
UPPER NECK FZ	LC-260Fz	DENTON	12-Dec-02
UPPER NECK MX	LC-260Mx	DENTON	12-Dec-02
UPPER NECK MY	LC-260My	DENTON	12-Dec-02
UPPER NECK MZ	LC-260Mz	DENTON	12-Dec-02
UPPER RIB	AC-P16862	ENDEVCO	18-Feb-03
LOWER RIB	AC-P16656	ENDEVCO	18-Feb-03
LOWER SPINE	AC-P16866	ENDEVCO	18-Feb-03
PELVIS	AC-P16676	ENDEVCO	18-Feb-03
UPPER RIB REDUNDANT	AC-P23156	ENDEVCO	18-Feb-03
LOWER RIB REDUNDANT	AC-P16645	ENDEVCO	18-Feb-03
LOWER SPINE REDUNDANT	AC-P19343	ENDEVCO	18-Apr-03
PELVIS REDUNDANT	AC-P16843	ENDEVCO	18-Feb-03

REAR SID NO.: 016			
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
NAAH HEAD X ARM Y	AC-01G18-F08	ENTRAN	01-Apr-03
NAAH HEAD X ARM Z	AC-00L20-A13	ENTRAN	01-Apr-03
NAAH HEAD Y ARM X	AC-00L20-A08	ENTRAN	28-Mar-03
NAAH HEAD Y ARM Z	AC-01G18-F13	ENTRAN	28-Mar-03
NAAH HEAD Z ARM X	AC-01J02-F18	ENTRAN	28-Mar-03
NAAH HEAD Z ARM Y	AC-01G25-N11	ENTRAN	28-Mar-03
HEAD AX	AC-P23960	ENDEVCO	10-Nov-02
HEAD AY	AC-P23940	ENDEVCO	09-Nov-02
HEAD AZ	AC-P23899	ENDEVCO	10-Nov-02
UPPER NECK FX	LC-261Fx	DENTON	12-Dec-02
UPPER NECK FY	LC-261Fy	DENTON	12-Dec-02
UPPER NECK FZ	LC-261Fz	DENTON	12-Dec-02
UPPER NECK MX	LC-261Mx	DENTON	12-Dec-02
UPPER NECK MY	LC-261My	DENTON	12-Dec-02
UPPER NECK MZ	LC-261Mz	DENTON	12-Dec-02
UPPER RIB	AC-P18524	ENDEVCO	17-Feb-03
LOWER RIB	AC-P18533	ENDEVCO	17-Feb-03
LOWER SPINE	AC-P18514	ENDEVCO	17-Feb-03
PELVIS	AC-P18519	ENDEVCO	17-Feb-03
UPPER RIB REDUNDANT	AC-P18528	ENDEVCO	17-Feb-03
LOWER RIB REDUNDANT	AC-P18518	ENDEVCO	17-Feb-03
LOWER SPINE REDUNDANT	AC-P18688	ENDEVCO	17-Feb-03
PELVIS REDUNDANT	AC-P18531	ENDEVCO	17-Feb-03

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-P19253	ENDEVCO	10-Feb-03
RIGHT FRONT SILL (Y)	AC-P21392	ENDEVCO	10-Feb-03
RIGHT FRONT SILL (Z)	AC-P23138	ENDEVCO	10-Feb-03
RIGHT REAR SILL (X)	AC-P23926	ENDEVCO	13-Mar-03
RIGHT REAR SILL (Y)	AC-P23864	ENDEVCO	13-Mar-03
RIGHT REAR SILL (Z)	AC-P23854	ENDEVCO	13-Mar-03
REAR FLOORPAN ABOVE AXLE (X)	AC-J31026	ENDEVCO	14-Apr-03
REAR FLOORPAN ABOVE AXLE (Y)	AC-J30491	ENDEVCO	14-Apr-03
REAR FLOORPAN ABOVE AXLE (Z)	AC-J32831	ENDEVCO	14-Apr-03
LEFT REAR SILL (Y)	AC-D69	ICS	28-Apr-03
LEFT FRONT SILL (Y)	AC-D30	ICS	28-Apr-03
LEFT FRONT DOOR CENTERLINE (Y)	-	-	-
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-D80	ICS	28-Apr-03
MID REAR OF LEFT FRONT DOOR (Y)	-	-	-
LEFT FRONT DOOR UPPER CL (Y)	-	-	-
MID REAR OF LEFT REAR DOOR (Y)	-	-	-
LEFT REAR DOOR UPPER CL (Y)	-	-	-
LOWER LEFT B-PILLAR (Y)	AC-8083-032	ICS	20-Nov-02
MIDDLE LEFT B-PILLAR (Y)	AC-9026-036	ICS	11-Nov-02
LOWER LEFT A-PILLAR (Y)	AC-8084-010	ICS	08-Nov-02
UPPER LEFT A-PILLAR (Y)	AC-J33198	ENDEVCO	16-Apr-03
FRONT SEAT TRACK (Y)	AC-8084-024	ICS	11-Nov-02
REAR SEAT TRACK (Y)	AC-8084-018	ICS	11-Nov-02
VEHICLE CG (X)	AC-J32832	ENDEVCO	16-Apr-03
VEHICLE CG (Y)	AC-J33376	ENDEVCO	16-Apr-03
VEHICLE CG (Z)	AC-J31095	ENDEVCO	14-Apr-03
MDB CG (X)	AC-C16433	ENDEVCO	17-Apr-03
MDB CG (Y)	AC-C16416	ENDEVCO	17-Apr-03
MDB CG (Z)	AC-C16499	ENDEVCO	17-Apr-03
MDB REAR FRAME MEMBER (X)	AC-C14948	ENDEVCO	17-Apr-03
MDB REAR FRAME MEMBER (Y)	AC-C16680	ENDEVCO	15-Apr-03

REMARKS: None